Edward Cocks.

1930

JAMES DAVIES
BOOKSELLER
BATH

By Robert Tyas.

WOODLAND GLEANINGS.

"Attractive is the Woodland scene,
Diversified with trees of every growth—
Alike yet various. . . . . .
. . . . . .
No tree in all the grove but has its charms."

FRONTISPIECE.

Groves were planted to console at noon
The pensive wanderer in their shades. At eve
The moonbeam sliding softly in between
The sleeping leaves, is all the light he wants
For meditation.

p. 34.

WOODLAND GLEANINGS.

WITH SIXTY-FOUR ILLUSTRATIONS.

NEW EDITION REVISED AND CORRECTED.

LONDON:
DEAN & SON, 11, LUDGATE HILL.

ADVERTISEMENT

TO THE SECOND EDITION.

To those who live in the country, or repair to it from our cities and towns for recreation or recruitment of health, we trust this will be an acceptable book, especially if they are unacquainted with Forest-trees. Our aim has been to produce a volume that will convey general and particular information respecting the timber-trees chiefly cultivated in the United Kingdom, to induce further inquiry respecting them, and to impart a new interest to the Woodland. To effect this we have briefly given their history and description, together with their botanical characters, remarks from our best authors on their habits and ornamental properties, on the usual mode of their cultivation, and on the value or utility of their timber. We have also introduced accounts of such remarkable trees as we considered of sufficient note to interest the general reader.

It has been objected that a few species, not recognised as Forest trees, have been included in this work; such as the Hawthorn, Holly, Mountain Ash, and Wild Cherry. But as these have been likewise admitted into a subsequent work of greater pretensions, the reason

2091064

there given by its author will be here equally sufficient:—"That though aware of the secondary rank of these trees in point of dimensions, when compared with the greater denizens of the Forest, he felt that the prominent station they occupy in the ornamental and picturesque departments of our native Sylvia, was sufficient to compensate for this defect, and to entitle them to the situation in which they have been placed."

That the thirty-two species particularly described may be the more readily identified, and their botanical characters more easily understood, there has been given a well executed wood-cut representation of the usual growth and representation of each tree, and another of the leaves, flowers, and fruit.

July 1, 1853.

LIST OF ILLUSTRATIONS.

		PAGE
1.	ALDER	41
2.	Leaves and Catkins	43
3.	ASH	47
4.	Leaves, Flowers, and Fruit	51
5.	BEECH	55
6.	Leaves, Flowers, and Fruit	59
7.	BIRCH	63
8.	Leaves and Catkins	65
9.	CEDAR OF LEBANON	69
10.	Foliage, Cone, &c.	73
11.	CHESTNUT	77
12.	Leaves, Catkins, &c.	79
13.	ELM	82
14.	Leaves and Flowers	85
15.	HAWTHORN	92
16.	Leaves, Blossom, and Fruit	95
17.	HAZEL	98
18.	Leaves, Catkins, and Nuts	100
19.	HOLLY	103
20.	Leaves, Flowers, and Fruit	105
21.	HORNBEAM	109
22.	Leaves, Catkins, and Fruit	111
23.	HORSE-CHESTNUT	114
24.	Leaves, Flowers, &c.	117
25.	LARCH	122
26.	Foliage, Catkins, &c.	125
27.	LIME, or LINDEN	132
28.	Leaves and Flowers	135
29.	MAPLE	139
30.	Leaves, Flowers, and Seeds	141
31.	MOUNTAIN ASH	145
32.	Leaves, Flowers, and Fruit	147

PAGE
33. MULBERRY 152
34. Leaves and Fruits 155
35. OAK 158
36. Leaves, Flowers, and Fruit 161
37. ORIENTAL PLANE 189
38. Leaves, and Globes of Flowers 191
39. OCCIDENTAL PLANE 196
40. Leaves and Flowers 199
41. POPLAR 201
42. (White) Leaves, Flowers, and Catkins . 203
43. SCOTCH FIR or PINE 207
44. Foliage, Catkins, Cones, &c. 209
45. SILVER FIR 217
46. Foliage and Cones 219
47. SPRUCE FIR 222
48. Foliage and Cones 225
49. SYCAMORE 227
50. Leaves, Flowers, and Samaræ 229
51. WALNUT 233
52. Leaves, Catkins, and Nuts 235
53. WEYMOUTH PINE 239
54. Foliage, Cones, &c. 241
55. WHITEBEAM 243
56. Leaves, Flowers, and Fruit 245
57. WILD BLACK CHERRY 247
58. Leaves, Flowers, and Fruit 249
59. WILD SERVICE 253
60. Leaves and Flowers 255
61. WILLOW 257
62. (Crack) Leaves and Catkins of *S. fragilis* . 263
63. YEW 269
64. Foliage, Leaves, and Fruit 271

INTRODUCTION.

The forest teems
With forms of majesty and beauty; some,
As the light poplar, wave with every sigh
Of zephyr, and some scarcely bend their heads
For very mightiness, when wintry storms
Are maddening the sea!

CARRINGTON.

DELIGHTFUL Edlington! how we love to saunter up and down the broad and verdant pathway that traverses thy wild domain. There, amid the deep imbosomed thickets, we feel that we are in "the haunts of meditation"—we feel that these are, indeed,

> The scenes where ancient bards th' inspiring breath
> Ecstatic felt;

And wish that the kind muses that them inspired would cast their united mantles over us, and aid us to sing the beauties of the woodland. But no friendly spirit deigns to tune our lyre; we are condemned to dull prose, and are permitted only here and there to call in some bard of old to aid our feeble efforts. Woodland! yea, the very name seems to revive recollections of delightful solitude —of calm and holy feelings, when the world has been, for the time, completely banished from its

throne—the throne of the human heart, which, alas! it too commonly occupies. O, how agreeable and pleasant is the woodland, when the trees are half clad with their green attire! How refreshing is the appearance of the tender leaf-bud, emerging from its sheath, just visible upon the dingy gray branches, those of one tree being generally a little in advance of others! We have never yet met with that insensate being whose heart is not elated at the sight. And to look, at this time, upon the vast assemblage of giant trees, whose skeleton, character, and figure may now be plainly traced. The dense foliage does not obscure them now, but they are beheld in all their majesty. "If the contrast of gray and mossy branches," says Howitt, "and of the delicate richness of young leaves gushing out of them in a thousand places be inexpressibly delightful to behold, that of one tree with another is not the less so. One is nearly full clothed; another is mottled with gray and green, struggling, as it were, which should have the predominance, and another is still perfectly naked. The pines look dim dusky amid the lively hues of spring. The abeles are covered with their clusters of alliescent and powdery leaves and withering catkins; and beneath them the pale spathes of the arum, fully expanded and displaying their crimson clubs, presenting a sylvan and unique air."

In Sweden, the budding and leafing of the birch-tree is considered as a directory for sowing barley; and as there is something extremely sub-

lime and harmonious in the idea, we flatter ourselves an account of it here will be acceptable.

Mr. Harold Barck, in his ingenious dissertation upon the foliation of trees, informs us, that Linnæus had, in the most earnest manner, exhorted his countrymen to observe, with all care and diligence, at what time each tree expanded its buds and unfolded its leaves; imagining, and not without reason, that his country would, some time or other, reap some new and perhaps unexpected benefit from observations of this kind made in different places.

As one of the apparent advantages, he advises the prudent husbandman to watch, with the greatest care, the proper time for sowing; because this, with the Divine assistance, produces plenty of provision, and lays the foundation of the public welfare of the state, and of the private happiness of the people. The ignorant farmer, tenacious of the ways and customs of his ancestors, fixes his sowing season generally to a month, and sometimes to a particular week, without considering whether the earth be in a proper state to receive the seed; from whence it frequently happens, that what the sower sowed with sweat, the reaper reaps with sorrow. The wise economist should therefore endeavour to fix upon certain signs, whereby to judge of the proper time for sowing. We see trees open their buds and expand their leaves, from whence we conclude that spring approaches, and experience supports us in the conclusion; but nobody has as yet been able to show us what trees

Providence has intended should be our calendar, so that we might know on what day the countryman ought to sow his grain. No one can deny but that the same power which brings forth the leaves of trees, will also make the grain vegetate; nor can any one assert that a premature sowing will always, and in every place, accelerate a ripe harvest. Perhaps, therefore, we cannot promise ourselves a happy success by any means so likely, as by taking our rule for sowing from the leafing of trees. We must for that end observe in what order every tree puts forth its leaves according to its species, the heat of the atmosphere, and the quality of the soil. Afterwards, by comparing together the observations of the several years, it will not be difficult to determine from the foliation of the trees, if not certainly, at least probably, the time when annual plants ought to be sown. It will be necessary, likewise, to remark what sowings made in different parts of the spring produce the best crops, in order that, by comparing these with the leafing of trees, it may appear which is the most proper time for sowing.

The temperature of the season, with respect to heat and cold, drought and wet, differing in every year, experiments made one year cannot, with certainty, determine for the following. They may assist, but cannot be conclusive. The hints of Linnæus, however, constitute a universal rule, as trees and shrubs, bud, leaf, and flower, shed their leaves in every country, according to the difference of the seasons.

Mr. Stillingfleet is the only person that has made correct observations upon the foliation of the trees and shrubs of this kingdom. The following is his calendar, which was made in Norfolk, in 1765:—

1 Honeysuckle	January 15	19 Marsh Elder	April 11
2 Gooseberry	March 11	20 Wych Elm	„ 12
3 Currant	„ 11	21 Mountain Ash	„ 13
4 Elder	„ 11	22 Hornbeam	„ 13
5 Birch	April 1	23 Apple-tree	„ 14
6 Weeping Willow	„ 1	24 Abele	„ 16
7 Raspberry	„ 3	25 Chestnut	„ 16
8 Bramble	„ 3	26 Willow	„ 17
9 Briar	„ 4	27 Oak	„ 18
10 Plum	„ 6	28 Lime	„ 18
11 Apricot	„ 6	29 Maple	„ 19
12 Peach	„ 6	30 Walnut	„ 21
13 Filbert	„ 7	31 Plane	„ 21
14 Sallow	„ 7	32 Black Poplar	„ 21
15 Alder	„ 7	33 Beech	„ 21
16 Sycamore	„ 9	34 Acacia Robinia	„ 21
17 Elm	„ 10	35 Ash	„ 22
18 Quince	„ 10	36 Carolina Poplar	„ 22

In different years, and in different soils and expositions, these trees and shrubs vary as to their leafing; but they are invariable as to their succession, being bound down to it by nature herself. A farmer, therefore, who would use this sublime idea of Linnæus, should diligently mark the time of budding, leafing, and flowering of different plants. He should also put down the days on which his respective grains were sown; and, by comparing these two tables for a number of years, he will be enabled to form an exact calendar for his spring corn. An attention to the discolouring

and falling of the leaves of plants, will assist him in sowing his winter grain, and teach him how to guess at the approach of winter. Towards the end of September, which is the best season for sowing wheat, he will find the leaves of various trees as follows :—

Plane-tree, tawny.	Ash, fine lemon.
Oak, yellowish green.	Elm, orange.
Hazel, yellow.	Hawthorn, tawny yellow.
Sycamore, dirty brown.	Cherry, red.
Maple, pale yellow.	Hornbeam, bright yellow.

There is a certain kind of genial warmth which the earth should enjoy at the time the seed is sown. The budding, leafing, and flowering of plants, seem to indicate this happy temperature of the earth. Appearances of this sublime nature may be compared to the writing upon the wall, which was seen by many, but understood by few. They seem to constitute a kind of harmonious intercourse between God and man, and are the silent language of the Deity.

> Welcome, ye shades! ye bowery thickets, hail!
> Ye lofty pines! ye venerable oaks!
> Ye ashes wild, resounding o'er the steep!
> Delicious is your shelter to the soul!

Yes, indeed, the woodland is an ever-pleasant place. There we may couch ourselves upon the mossy bank, and listen to the murmuring "brook that bubbles by," or to the sweet sounds that issue from

> Every warbling throat
> Heard in the tuneful woodlands.

Yea, truly,

> There, plunged amid the shadows brown,
> Imagination lays him down,
> Attentive, in his airy mood,
> To every murmur of the wood;
> The bee in yonder flowery nook,
> The chidings of the headlong brook,
> The green leaf shivering in the gale,
> The warbling hills, the lowing vale,
> The distant woodman's echoing stroke,
> The thunder of the falling oak.

Carlos Wilcox sings so sweetly of vernal melody in the forest, that we shall favour our readers with his song:

> With sonorous notes
> Of every tone, mixed in confusion sweet,
> All chanted in the fulness of delight,
> The forest rings. Where, far around enclosed
> With bushy sides, and covered high above
> With foliage thick, supported by bare trunks,
> Like pillars rising to support a roof,
> It seems a temple vast, the space within
> Rings loud and clear with thrilling melody.
> Apart, but near the choir, with voice distinct,
> The merry mocking-bird together links
> In one continued song their different notes,
> Adding new life and sweetness to them all:
> Hid under shrubs, the squirrel, that in fields
> Frequents the stony wall, and briery fence,
> Here chirps so shrill that human feet approach
> Unheard till just upon him, when, with cries,
> Sudden and sharp, he darts to his retreat,
> Beneath the mossy hillock or aged tree;
> But oft, a moment after, re-appears,
> First peeping out, then starting forth at once
> With a courageous air, yet in his pranks
> Keeping a watchful eye, nor venturing far
> Till left unheeded.

As the summer advances, forest-trees assume a

beautiful variety. The Oak has "spread its amber leaves out in the sunny sheen;" the ash, the maple, the beech, and the sycamore are each clad in delicate vestures of green; and the dark perennial firs are enlivened and enriched by the young shoots and the cones of lighter hue.

"In the middle of summer," observes Howitt, "it is the very carnival of Nature, and she is prodigal of her luxuries. It is luxury to walk abroad, indulging every sense with sweetness, loveliness, and harmony. It is luxury to stand beneath the forest side, when all is still and basking, at noon; and to see the landscape suddenly darken, the black and tumultuous clouds assemble as at a signal; to hear the awful thunder crash upon the listening ear; and then, to mark the glorious bow rise on the lurid rear of the tempest, the sun laugh jocundly abroad, and every bathed leaf and blossom fair,

Pour out its soul to the delicious air.

But of the seasons autumn is the most pleasant for a woodland ramble. The depth of gloom, the silence, the wild cries that are heard flitting to and fro; the falling leaves already rustling to the tread, and strewing the forest walk, render it particularly pleasant. "And then those breaks; those openings; those sudden emergings from shadow and silence to light and liberty; those unexpected comings out to the skirts of the forest, or to some wild and heathy tract in the very depth of the woodlands! How pleasant is the thought

of it!" The appearance of woods in autumn is indeed more picturesque, and more replete with incidental beauty than at any season of the year. So evident is this, that painters have universally chosen it as the season of landscape. The leafy surface of the forest is then so varied, and the masses of foliage are yet so full, that they allow the artist great latitude in producing his tints, without injuring the breadth of his lights.

> — The fading, many-coloured woods,
> Shade deepening over-shade, the country round
> Imbrown; a varied umbrage, dusk and dun,
> Of every hue, from wan declining green
> To sooty dark.

Of all the hues of autumn, those of the oak are commonly the most harmonious. In an oaken wood, you see every variety of green and brown, owing either to the different exposure of the tree, the difference of the soil, or its own nature. In the beechen grove, this variety is not to be found. In early autumn, when the extremities of the trees are slightly tinged with orange, it may be partially produced; but late the eye is usually fatigued with one deep monotonous shade of orange, though perhaps it is the most beautiful among all the hues of autumn. And this uniformity prevails wherever the ash and elm abound, though of a different hue; and, indeed, no fading foliage excepting that of the oak, produces harmony of colouring.

Even when the beauty of the landscape has departed, the charms of autumn may remain.

When the raging heat of summer is abated, and ere the rigours of winter are set in, there are frequent days of such heavenly temperature, that every mind must feel their effect. Thomson thus describes a day of this kind:

> The morning shines
> Serene, in all its dewy beauties bright,
> Unfolding fair the last autumnal day,
> O'er all the soul its sacred influence breathes;
> Inflames imagination, through the breast
> Infuses every tenderness, and far
> Beyond dim earth exalts the swelling thought.

We now proceed to give a detailed notice of some of the component parts of the woodland scenery, beginning with the single tree.

We feel no hesitation in calling a tree the grandest and most beautiful of all the various productions of the earth. In respect to its grandeur, nothing can compete with it; for the everlasting rocks and lofty mountains are parts of the earth itself. And though we find great beauty—beauty at once perceptible and ever-varying, and consequently more universally felt and appreciated—among plants of an inferior order—among shrubs and flowers, yet these latter may be considered beautiful rather as individuals, for as they are not adapted to form the arrangement of composition in landscape, nor to receive the effect of light and shade, they must give place in point of beauty—of picturesque beauty at least—to the form, and foliage, and ramification of the tree.

The tree, however, we do not place in competition with animal life. "The shape, the different coloured

furs, the varied and spirited attitudes, the character and motion, which strike us in the animal creation, are unquestionably beyond still life in its most pleasing appearance." With regard to trees, nature has been more liberal to them in point of variety, than even to its living forms. "Though every animal is distinguished from its fellow, by some little variation of colour, character, or shape; yet in all the larger parts, in the body and limbs, the resemblance is generally exact. In trees, it is just the reverse: the smaller parts, the spray, the leaves, the blossom, and the seed, are the same in all trees of the same kind; while the larger parts, from which the most beautiful varieties result, are wholly different." For instance, you never see two oaks with the same number of limbs, the same kind of head, and twisted in the same form.

When young, trees, like striplings, shoot into taper forms. There is a lightness and an airiness about them, which is pleasing; but they do not spread and receive their just proportions, until they have attained their full growth.

There is as much difference, too, in trees—that is, in trees of the same kind—in point of beauty, as there is in human figures. The limbs of some are set on awkwardly, their trunks are disproportioned, and their whole form is unpleasing. The same rules, which establish elegance in other objects, establish it in these. There must be the same harmony of parts, the same sweeping line, the same contrast, the same ease and freedom. A

bough, indeed, may issue from the trunk at right angles, and yet elegantly, as it frequently does in the oak; but it must immediately form some contrasting sweep, or the junction will be awkward.

Generally speaking, trees when lapped and trimmed into fastidious shapes, become ugly and displeasing. Thus clipped yews, lime hedges, and pollards, being rendered unnatural in form, are disagreeable; though sometimes a pollard produces a good effect, when Nature has been suffered, after some years, to bring it again into shape.

Lightness is a characteristic of beauty in a tree; for though there are beautiful trees of a heavy, as well as of a light form, yet their extremities must in some parts be separated, and hang with a degree of looseness from the fulness of the foliage, which occupies the middle of the tree, or the whole will only be a large bush. From position, indeed, and contrast, heaviness, though in itself a deformity, may be of singular use in the composition both of natural and of artificial landscape.

A tree must be well balanced to be beautiful, for it may have form and lightness, and yet lose its effect from not being properly poised; though occasionally beauty may be found in an unbalanced tree, yet this must be caused by some peculiarity in its situation. For instance, when hanging over a rock, if altogether unpoised, it may be beautiful; or bending over a road, its effect may be good.

We have often admired the massy trunk of an aged forest oak; and Gilpin says he frequently examined the varied tints which enriched its fur-

rowed stem. The genuine bark of an oak is ash coloured, though it is not easy to distinguish this, from the quantity of moss which overspreads it; for we suppose every oak has more or less of these picturesque appendages. About the roots there is a green velvet moss, which is found in a greater degree to occupy the bole of the beech, though its beauty and brilliancy lose much when in decay. As the trunk rises, you see the brimstone colour taking possession in patches. Of this there are two principal kinds: a smooth sort, which spreads like a scurf over the bark, and a rougher sort, which hangs in little rich knots and fringes. This sometimes inclines to an olive hue, and occasionally to a light green. Intermixed with these mosses is frequently found a species perfectly white. Here and there, a touch of it gives lustre to the trunk, and has its effect; yet, on the whole, it is a nuisance, for as it generally begins to thrive when the other mosses begin to wither, it is rarely accompanied with any of the more beautiful species of its kind. This is a sure sign that the vigour of the tree is declining. There is another species of a dark-brown colour, inclining to black; another of an ashy colour; and another of a dingy yellow. Touches of red are also observable, and occasionally, though rarely, a bright yellow, which is like a gleam of sunshine. These add a great richness to the trees, and when blended harmoniously, as they commonly are, the rough and furrowed trunk of an oak, thus adorned, is an object which will long detain the picturesque eye.

These and other incidental appendages to a tree are greatly subservient to the uses of the pencil, and the poet will now and then deign to deck his trees with these ornaments. He sometimes calls into being some mighty agent, as guardian of the woods, who cries out,

> From Jove I am the Power
> Of this fair wood, and live in oaken bower.
> I nurse my saplings tall; and cleanse their rind
> From vegetating filth of every kind;
> And all my plants I save from nightly ill
> Of noisome winds, and blasting vapours chill.

The blasted tree adds much to effect, both in artificial and natural landscape. In some scenes it is nearly essential. When the dreary heath is spread before the eye, and ideas of wildness and desolation are required, what more suitable accompaniment can be imagined, than the blasted oak, ragged, scathed, and leafless, shooting its peeled white branches athwart the gathering blackness of some rising storm?

> As when heaven's fire
> Hath scathed the forest oak, or mountain pine,
> With singed top its stately growth, though bare,
> Stands on the blasted heath.
>
> — beneath that oak,
> Whose shattered majesty hath felt the stroke
> Of Heaven's own thunder—yet it proudly heaves
> A giant sceptre wreathed with blasted leaves—
> As though it dared the elements.
>
> NEALE.

Ivy also gives great richness to an old trunk, both by its stem, which often winds round it in thick, hairy, irregular volumes; and by its leaf,

which either decks the furrowed bark, or creeps among the branches, or carelessly hangs from them. It unites with the mosses, and other furniture of the trees, in adorning and enriching it.

The tribes of mosses, lichens, and liver-worts, are all parasitical; it is doubted whether the ivy is or not. The former, however, are absolute retainers. The character of the ivy, too, has been misrepresented, if his feelers have not some other purpose than that of enabling him to show his attachment to his patient supporter. Shakspeare asserts that he makes a property of him :

> He was
> The ivy which had hid my princely trunk,
> And sucked my verdure out.

Besides these there are others which are sustained entirely by their own means. Among them we may distinguish the black and white briony. The berries of many of these little plants are variously coloured in the different stages of their growth—yellow, red, and orange. All these produce their effect. The feathered seeds of the traveller's joy are also ornamental. The wild honeysuckle comes within this class; and it fully compensates for any injury it may do by the compression of the young branches, by its winding spiral coils, and by the beauty and fragrance of its flowers :

> With clasping tendrils it invests the branch,
> Else unadorned, with many a gay festoon,
> And fragrant chaplet; recompensing well
> The strength it borrows with the grace it lends.

In warm climates, where vines are the spontaneous

offspring of nature, nothing can have a more pleasing effect than the forest-tree adorned with their twisting branches, hanging in rich festoons from bough to bough, and laden with fruit,—

> the clusters clear
> Half through the foliage seen.

In England, the hop we consider the most beautiful appendage of the hanging kind. In its rude natural state, indeed, twisting carelessly round the branches of trees, it has as good an effect as the vine. Its leaf is similar; and though its bunches are not so beautiful as the clusters of the vine, it is more accommodating, hangs more loosely, and is less extravagant in its growth.

The motion of trees is one source of considerable beauty. The waving heads of some, and the undulation of others, give a continual variety to their forms. In nature this is certainly a circumstance of great beauty:

> Things in motion sooner catch the eye
> Than what stirs not;

and this also affords the chequered shade, formed under it by the dancing of the sunbeams among its playing leaves. This circumstance is of a very amusing nature, and is capable of being beautifully wrought up in poetry:

> The chequered earth seems restless as a flood
> Brushed by the winds. So sportive is the light,
> Shot through the boughs, it dances as they dance,
> Shadow and sunshine intermingling quick,
> And darkening and enlightening (as the leaves
> Play wanton) every part.

The clump of trees next occupies our attention. The term, says Gilpin, has rather a relative meaning, as no rule of art hath yet prescribed what number of trees form a clump. Near the eye we should call three or four trees a clump, and at the same time, in distant or extensive scenery, we should apply the same term to any smaller detached portion of wood, though it may be formed of hundreds of trees. But though the term admits not of exact definition, we will endeavour to make the ideas contained under it as distinct as possible.

We distinguish, then, two kinds of clumps, the smaller and the larger; confining the former chiefly to the foreground, and considering the latter as a distant ornament.

With respect to the former, we apprehend its chief beauty arises from contrast in the parts. We shall attempt to enumerate some of the sources whence the beauty of contrast is produced. Three trees, or more, standing in a line, are formal, but in the natural wood this formality is rarely found. And yet even three trees in a line will be greatly assisted by the lines of the several trunks taking different directions; and by the various forms, distances, and growth of the trees.

If three trees do not stand in a line, they must of course stand in a triangle, which produces a great variety of pleasing forms. And if a fourth tree be added, it stands beautifully near the middle of the triangle, of whatever form the triangle may be. If the clump consist of more trees than four, a still greater variety among the stems will of

course take place; double triangles, and other pleasing shapes, all of which may be seen exemplified in every wood of natural growth.

The branches are not less the source of contrast than the stem. To be picturesque, they must intermingle with each other without heaviness; they must hang loosely, but yet with varied looseness on every side; and if there be one head or top of the tree above another, there may be two or three subordinate, according to the size of the clump.

Different kinds of trees, in the same clump, often occasion a beautiful contrast. There are few trees which will not harmonize with trees of another kind; though it may be that contrasts the most simple and beautiful are produced by the various modes of growth in the same species. Two or three oaks, intermingling their branches together, have often a very pleasing effect. The beech, when fully grown, is commonly (in a luxuriant soil at least), so heavy, that it seldom blends happily, either with its own kind or any other. The silver fir, too, is a very unaccommodating tree, as also all the other firs, and indeed every kind of tree that tapers to a point. The pine race, however, being clump-headed, unite well in composition. With these also the Scotch fir leagues, from little knots of which we often see beautiful contrasts arise. When they are young and luxuriant, especially if any number of them above four or five are planted together, they generally form a heavy murky spot, but as they acquire age this heaviness goes off, the inner branches decay, the outer

branches hang loosely and negligently, and the whole has frequently a good effect, unless they have been planted too closely. It may be doubted how far deciduous trees mingle well in a clump with evergreens; and yet, occasionally, from the darkness of the fir contrasting agreeably with the sprightly green of a deciduous tree just coming into leaf, a natural good effect of light and shade is produced.

Contrasts arise, again, from the mixture of trees of unequal growth, from a young tree united with an old one, a stunted tree with a luxuriant one, and sometimes from two or three trees, which in themselves are ill-shaped, but when combined are pleasing. Inequalities of all these kinds are what chiefly give nature's planting a superiority over art.

The form of the foliage is another source of contrast. In one part, where the branches intermingle, the foliage will be interwoven and close; in another, where the boughs of each tree hang separately, the appearance will be light and easy.

But whatever beauty these contrasts exhibit, the effect is altogether lost if the clump be not well balanced. If no side preponderate so as to offend the eye, it is enough, and unless the clump have sustained some external injury, it is seldom deficient in point of balance. Nature generally conducts the stems and branches in such easy forms, wherever there is an opening, and fills up all with such nice contrivance, and with so much picturesque irregularity, that we rarely wish for an amendment in her works. So true is this, that

you may not take away a tree from a clump without infallibly destroying the balance which can never again be restored.

When the clump grows larger, it becomes qualified only as a remote object, combining with vast woods, and forming a part of some extensive scene, either as a first, a second, or a third distance.

The great use of the larger clump is to lighten the heaviness of a continued distant wood, and connect it gently with the plain, that the transition may not be too abrupt. All we wish to find in a clump of this kind is proportion and general form.

With respect to proportion, the detached clump must not encroach too much on the dignity of the wood it aids, but must observe a proper subordination. A large tract of country covered with wood, will admit several of these auxiliary clumps, of different dimensions. But if the wood be of a smaller size, the clumps must also be smaller and fewer.

As the clump becomes larger and recedes in the landscape, all the pleasing contrasts we expected in the smaller clumps are lost, and we are satisfied with a general form. No regular form is pleasing. A clump on the side of a hill, or in any situation where the eye can more easily investigate its shape, must be circumscribed by an irregular line; in which the undulations, both at the base and summit of the clump, should be strongly marked, as the eye has probably a distinct view of both. But if seen only on the top of a hill, or along the distant horizon, a little variation in the line which

forms the summit, so as to break any disagreeable regularity there, will be sufficient.

As a large tract of wood requires a few large clumps to connect it gently with the plain, so these large clumps themselves require the same service from a single tree, or a few trees, according to their size.

The Copse, the Glen, and the open Grove next demand our notice.

The Copse is a species of scenery composed generally of forest-trees, intermixed with brushwood, which latter is periodically cut down in twelve, thirteen, or fourteen years. In its dismantled state, nothing can be more forlorn. The area is covered with bare roots and knobs, from which the brushwood has been cut; while the forest-trees, intermingled among them, present their ragged stems, despoiled of all their lateral branches, which the luxuriance of the surrounding thickets had choked. The copse, however, soon repairs the injury it has thus suffered. One winter only sees its disgrace. The following summer produces luxuriant shoots; and two summers more restore it almost to perfect beauty.

It is of little moment what species of wood composes the copse; for we do not expect from it scenes of picturesque beauty, but are satisfied if it yields us a shady sequestered path, which it generally furnishes in great perfection. It is among the luxuries of nature, to retreat into the cool recesses of the full-grown copse from the severity of a meridian sun, and to be serenaded by the humming

insects of the shade, whose continuous song has a more refreshing sound than the buzzing vagrant fly, which wantons in the glare of day, and, as Milton expresses it,

——— winds her sultry horn.

In distant landscape the copse hath seldom any effect. The beauty of a wood in a distant view arises in some degree from its tuftings which break and enrich the lights, but chiefly from its contrast with the plain, and from the grand shapes and forms, occasioned by the retiring and advancing parts of the forest, which produce vast masses of light and shade, and give effect to the whole.

These beauties appear rarely in the copse. Instead of that rich and tufted bed of foliage, which the distant forest exhibits, the copse presents a meagre and unaccommodating surface. It is age which gives the tree its tufted form, and the forest its effect. A nursery of saplings produces it not, and the copse is little more, nor does the intermixture of full-grown trees assist the appearance. Their clumpy heads blend ill with the spiry tops of the juniors. Neither have they any connection with each other. The woodman's judgment is shown in leaving the timber-trees at proper intervals, that they may neither hinder each other's growth, nor the growth of the underwood. But the woodman does not pretend to manage his trees with a view to picturesque beauty; and from his management, it is impossible they should produce a mass of light and shade. Besides, the copse forms no

contrast with the plain, nor presents those beautiful projections and recesses which the skirts of the forest exhibit. A copse is a plot of ground, proportioned off for the purpose of nurturing wood. Of course it must be fenced from cattle; and these fences, which are in themselves disgusting, generally form the copse into a square, or some other regular figure; so that we have not only a deformity, but a want also of a connecting tie between the wood and the plain. Instead of a softened undulating line, we have a harsh fence.

The best effect which the copse produces, is on the lofty banks of the river; this may be seen particularly on the Wye. In navigating such a river, the deficiencies of this mode of scenery, as you view it upwards from a boat, are lost; and in almost every state it has a good effect. While it enriches the bank, its uncouth shape, unless the fence is too much in view, and all its other unpleasant appearances, are concealed.

When a winding walk is carried through a copse, which must necessarily in a few years, even in point of picturesque beauty, be given to the axe, shall the whole be cut down together? Or shall a border be left, as is sometimes done, on each side of the walk?

This is a difficult question; but Gilpin thinks it should all go together. Unless the border you leave be very broad, it will have no effect, even at present. You will see through it; it will appear meagre, and will never unite happily with the neighbouring parts when they begin to grow; at

least, it ought not to stand longer than two years. The rest of the copse will then be growing beautiful, and the border may be dispensed with till it is replaced. But the way, decidedly, is to cut down all together. In a little time it will recover its beauty.

We now proceed to the Glen. A wide and open space between hills, is called a vale. If it be of smaller dimensions, we call it a valley. But when this space is contracted to a chasm, it becomes a glen.

A glen, therefore, is commonly the offspring of a mountainous country; though sometimes found elsewhere, with its usual accompaniments of woody banks, and a rivulet at the bottom. The glen may be more or less contracted. It may form one single sweep, or its deviations may be irregular. The wood may consist of full-grown trees, or of underwood, or of a mixture of both. The path winding through it may run along the upper or the lower part. Or the rivulet may foam among rocks, or murmur among pebbles;—it may form transparent pools, overhung with wood;—or, which is frequently the case, it may be invisible, and an object only of the ear. All these circumstances are capable of an infinite variety.

The beauties of the internal parts of the glen consist chiefly in the glades, or openings, which are found in it. If the whole were a thicket, little beauty would result. Unlike the copse, its furniture is commonly of a fortuitous growth, and escapes those periodical defalcations to which the

copse is subject, and generally exhibits more beautiful scenery. It abounds with frequent openings. The eye is carried down, from the higher grounds, to a sweep of the river—or to a little gushing cascade—or to the face of a fractured rock, garnished with hanging wood—or perhaps to a cottage, with its scanty area of lawn falling to the river on one side, and sheltered by a clump of oaks on the other; while the smoke, wreathing behind the trees, disperses and loses itself as it gains the summit of the glen. Or, still more beautifully, the eye breaks out at some opening, perhaps into the country, enriched with all the varieties of distant landscape—plains and woods melting together —a winding river—blue mountains—or perhaps some bay of the sea, with a little harbour and shipping.

As an object of distance also, the woody glen has often a good effect—climbing the sides of mountains, breaking their lines, and giving variety to their bleak and barren sides.

From the glen we hasten to the open Grove, which is composed of trees arising from a smooth area, and consisting either of pines or of the deciduous race. Beautiful groves of both may be seen. That of the pine will always be dry, as it is the peculiar quality of its leaves to imbibe moisture: but in lightness, variety, and general beauty, that of deciduous trees excels. If, however, you wish your grove to be in the gloomy style, the pine race will serve your purpose best.

The open grove rarely makes a picturesque

appearance. It may, indeed, have the effect of other woods in distant scenery; for the trees of which it is formed need not be separated from each other, as in the copse, but, being well massed together, may receive beautiful effects of light. When we enter its recesses, it is not so well calculated to please. There it wants variety, and that not only from the smoothness of the surface, but from the uniformity of the furniture—at least if it be an artificial scene, in which the trees, having been planted in a nursery, grow all alike, with upright stems. And yet a walk, upon a velvet turf, winding at pleasure among these natural columns, whose twisting branches at least admit some variety, with a spreading canopy of foliage over the head, is pleasing, and in hot weather refreshing. Sometimes we find the open grove of natural growth; it is then more various and irregular, and becomes, of course, a more pleasing scene. And yet, when woods of this kind continue, as they sometimes do, in unpeopled countries, through half a province, they become tiresome, and prove that it is not wood, but variety of landscape, that delights the eye. The pleasing tranquillity of groves hath ever been in high repute among the innocent and refined part of mankind:

> Groves were planted to console at noon
> The pensive wanderer in their shades. At eve
> The moonbeam sliding softly in between
> The sleeping leaves, is all the light he wants
> For meditation.

Indeed, no species of landscape is so fitted for

meditation. The forest attracts the attention by its grandeur, and the park scene by its beauty; while the paths through copses, dells, and thickets, are too close, devious, interrupted, and often too beautiful to allow the mind to be at perfect ease. But the uniform sameness of the grove leaves the eye disengaged; and the feet wandering at pleasure, where they are confined by no path, want little direction. The mind, therefore, undisturbed, has only to retire within itself. Hence the philosopher, the devotee, the poet, all retreated to these quiet recesses; and,

> from the world retired,
> Conversed with angels and immortal forms.

In classic times, the grove was the haunt of gods; and in the days of Nature, before art had introduced a kind of combination against her, men had no idea of worshipping God in a temple made with hands. The *templum nemorale* was the only temple he knew.

> In the resounding wood,
> All vocal beings hymned their equal God.

And to this idea, indeed, one of the earliest forms of the artificial temple seems to have been indebted. Many learned men have thought the Gothic arch of our cathedral churches was an imitation of the natural grove. It arises from a lofty stem, or from two or three stems, if they be slender; which being bound together, and spreading in every direction, cover the whole roof with their ramifications. In the close recesses of the

beechen grove, we find this idea the most complete. The lofty, narrow aisle—the pointed arch—the clustered pillar, whose parts separating without violence, diverge gradually to form the fretted roof—find there perhaps their earliest archetype. Bryant has wrought out this idea in a beautiful fragment, entitled "God's First Temples:"

The groves were God's first temples. Ere man learned
To hew the shaft, and lay the architrave,
And spread the roof above them,—ere he framed
The lofty vault, to gather and roll back
The sound of anthems,—in the darkling wood,
Amidst the cool and silence he knelt down,
And offered to the Mightiest solemn thanks
And supplication. For his simple heart
Might not resist the sacred influences,
That, from the stilly twilight of the place,
And from the gray old trunks, that, high in heaven,
Mingled their mossy boughs, and from the sound
Of the invisible breath that swayed at once
All their green tops, stole over him, and bowed
His spirit with the thought of boundless Power
And inaccessible Majesty. Ah, why
Should we, in the world's riper years, neglect
God's ancient sanctuaries, and adore
Only among the crowd, and under roofs
That our frail hands have raised! Let me, at least,
Here in the shadow of this aged wood,
Offer one hymn—thrice happy, if it find
Acceptance in his ear.
Father, thy hand
Hath reared these venerable columns; thou
Didst weave this verdant roof. Thou didst look down
Upon the naked earth, and, forthwith, rose
All these fair ranks of trees. They, in thy sun,
Budded, and shook their green leaves in thy breeze,
And shot towards heaven. The century-living crow,
Whose birth was in their tops, grew old and died
Among their branches, till at last they stood,

As now they stand, massy, and tall, and dark,
Fit shrine for humble worshipper to hold
Communion with his Maker. Here are seen
No traces of man's pomp or pride;—no silks
Rustle, no jewels shine, nor envious eyes
Encounter; no fantastic carvings show
The boast of our vain race to change the form
Of thy fair works. But thou art here—thou fill'st
The solitude. Thou art in the soft winds
That run along the summits of these trees
In music;—thou art in the cooler breath,
That, from the inmost darkness of the place,
Comes, scarcely felt;—the barky trunks, the ground,
The fresh, moist ground, are all instinct with thee.
Here is continual worship;—nature, here,
In the tranquillity that thou dost love,
Enjoys thy presence. Noiselessly, around,
From perch to perch, the solitary bird
Passes; and yon clear spring, that, 'midst its herbs,
Wells softly forth, and visits the strong roots
Of half the mighty forest, tells no tale
Of all the good it does. Thou hast not left
Thyself without a witness, in these shades,
Of thy perfections. Grandeur, strength, and grace,
Are here to speak of thee. This mighty oak—
By whose immovable stem I stand, and seem
Almost annihilated—not a prince,
In all the proud old world beyond the deep,
E'er wore his crown as loftily as he
Wears the green coronal of leaves with which
Thy hand has graced him. Nestled at his root
Is beauty, such as blooms not in the glare
Of the broad sun. That delicate forest flower,
With scented breath, and look so like a smile,
Seems, as it issues from the shapeless mould,
An emanation of the indwelling Life,
A visible token of the upholding Love,
That are the soul of this wide universe.
My heart is awed within me, when I think
Of the great miracle that still goes on,
In silence, round me—the perpetual work
Of thy creation, finished, yet renewed

For ever. Written on thy works, I read
The lesson of thy own eternity.
Lo! all grow old and die: but see, again,
How, on the faltering footsteps of decay,
Youth presses—ever gay and beautiful youth,
In all its beautiful forms. These lofty trees
Wave not less proudly than their ancestors
Moulder beneath them. O, there is not lost
One of earth's charms: upon her bosom yet,
After the flight of untold centuries,
The freshness of her far beginning lies,
And yet shall lie. Life mocks the idle hate
Of his arch-enemy Death—yea, seats himself
Upon the sepulchre, and blooms and smiles,
And of the triumphs of his ghastly foe
Makes his own nourishment. For he came forth
From thine own bosom, and shall have no end.
There have been holy men, who hid themselves
Deep in the woody wilderness, and gave
Their lives to thought and prayer, till they outlived
The generation born with them, nor seemed
Less aged than the hoary trees and rocks
Around them;—and there have been holy men,
Who deemed it were not well to pass life thus.
But let me often to these solitudes
Retire, and, in thy presence, reassure
My feeble virtue. Here its enemies,
The passions, at thy plainer footsteps shrink,
And tremble, and are still. O God! when thou
Dost scare the world with tempests, set on fire
The heavens with falling thunderbolts, or fill,
With all the waters of the firmament,
The swift, dark whirlwind, that uproots the woods,
And drowns the villages; when, at thy call,
Uprises the great Deep, and throws himself
Upon the continent, and overwhelms
Its cities;—who forgets not, at the sight
Of these tremendous tokens of thy power,
His pride, and lays his strifes and follies by?
O, from these sterner aspects of thy face,
Spare me and mine; nor let us need the wrath
Of the mad, unchained elements to teach

Who rules them. Be it ours to meditate,
In these calm shades, thy milder majesty,
And, to the beautiful order of thy works,
Learn to conform the order of our lives.

We will conclude this Introduction by recommending the reader, in the words of the poet, to enjoy the sweet calmness of the Woodland retreat :

If thou art worn and hard beset
With sorrows that thou would'st forget—
If thou would'st read a lesson that will keep
Thy heart from fainting, and thy soul from sleep,
Go to the woods and hills!—no tears
Dim the sweet look that nature wears.

STRANGER, if thou hast learnt a truth, which needs
Experience more than reason, that the world
Is full of guilt and misery, and hast known
Enough of all its sorrows, crimes and cares,
To tire thee of it,—enter this wild wood,
And view the haunts of Nature. The calm shade
Shall bring a kindred calm, and the sweet breeze,
That makes the green leaves dance, shall waft a balm
To thy sick heart. Thou wilt find nothing here
Of all that pained thee in the haunts of men,
And made thee loathe thy life. The primal curse
Fell, it is true, upon the unsinning earth,
But not in vengeance. Misery is wed
To guilt. And hence these shades are still the abodes
Of undissembled gladness: the thick roof
Of green and stirring branches is alive
And musical with birds, that sing and sport
In wantonness of spirit; while, below,
The squirrel, with raised paws and form erect,
Chirps merrily. Throngs of insects in the glade
Try their thin wings, and dance in the warm beam
That waked them into life. Even the green trees
Partake the deep contentment: as they bend
To the soft winds, the sun from the blue sky
Looks in and sheds a blessing on the scene.
Scarce less the cleft-born wild-flower seems to enjoy
Existence, than the winged plunderer
That sucks its sweets. The massy rocks themselves,
The old and ponderous trunks of prostrate trees,
That lead from knoll to knoll, a causey rude,
Or bridge the sunken brook, and their dark roots,
With all their earth upon them; twisting high
Breathe fixed tranquillity. The rivulet
Sends forth glad sounds, and, tripping o'er its bed
Of pebbly sands, or leaping down the rocks,
Seems with continuous laughter to rejoice
In its own being. Softly tread the marge,
Lest from her midway perch thou scare the wren
That dips her bill in water. The cool wind,
That stirs the stream in play shall come to thee,
Like one that loves thee, nor will let thee pass
Ungreeted, and shall give its light embrace.

BRYANT.

THE ALDER-TREE.

[*Alnus.** Nat. Ord.—*Amentiferæ;* Linn.—*Monœc. Tetra.*]

The Common Alder (*A. glutinosa*), is the most aquatic of European trees. It grows to the height of fifty or sixty feet, in favourable situations by the sides of streams, and is a somewhat picturesque tree in its ramification as well as its foliage. It

* *Generic characters.* Scales of the barren catkins, 3-lobed, 3-flowered. Perianth 4-cleft. Scales of the fertile catkin ovate, 2-flowered, coriaceous, persistent. Styles 2, parallel, setiform, deciduous; stigma simple. Fruit a nut, ovate, 2-celled. Kernel solitary, ovate, acute. Name, Celtic, from *al*, and *lan*, a river bank.

is nearly related, in nature rather than in form, to the willow tribe; it is more picturesque than the latter, and perhaps the most so of any of the aquatic species, except the weeping willow. Gilpin says, that if we would see the Alder in perfection, we must follow the banks of the Mole, in Surrey, through the sweet vales of Dorking and Mickleham, into the groves of Esher. The Mole, indeed, is far from being a beautiful river; it is a silent and sluggish stream: but what beauty it has it owes greatly to the Alder, which everywhere fringes its meadows, and in many places forms very pleasing scenes; especially in the vale between Box Hill and the high grounds of Norbury Park. Spenser probably once reposed under the shade of these trees, as he mentions them in his "Colin Clout's come home again."

> One day, quoth he, I sate, as was my trade,
> Under the foot of Mole, that mountain hore,
> Keeping my sheep among the cooly shade
> Of the green Alders on the Mulla shore.

Some of the largest Alders in England grow in the Bishop of Durham's park, at Bishop Auckland. In speaking of these, Gilpin remarks, that "the generality of trees acquire picturesque beauty by age; but it is not often that they are suffered to attain this picturesque period. Some use is commonly found for them long before that time. The oak falls for the greater purposes of man, and the Alder is ready to supply a variety of his smaller wants. An old tree, therefore, of any kind is a curiosity; and even an Alder, such as those at

Bishop Auckland, when dignified by age, makes a respectable figure."

The Alder grows naturally in Europe from Lap-

Specific character of A. glutinosa. Common Alder. Leaves roundish, cuneate, waved, serrate, glutinous, downy at the branching of the veins beneath. A moderately sized tree, with rugged bark, and crooked, spreading, smooth branches: barren catkins long, pendulous; fertile ones short, oval. Flowers in March.

land to Gibraltar, in Asia from the White Sea to Mount Caucasus, and in the north of Africa, as well as being indigenous in England. The flowers bloom in March and April; they have no gay tints or beauty to recommend them, and consequently afford pleasure only to the botanist or the curious observer of nature. The leaves begin to open about the 7th of April, and when fully expanded are of a deep dull green. The bark being smooth and of a purplish hue, the tree has an agreeable effect among others in all kinds of plantations of the watery tribe.

The Alder must have grown to a great size in days of yore; for Virgil speaks of vessels made of this material:

> When hollow Alders first the waters tried.

And again:

> And down the rapid Po light Alders glide.

Ovid also tells us that

> Trees rudely hollowed did the waves sustain,
> Ere ships in triumph ploughed the watery main.

Abroad this tree is raised from seed, which is decidedly the best mode, and secures the finest specimens; though in this country they are generally propagated by layers or truncheons. The best time for planting the latter, is in February or March; the truncheons being sharpened at the end, the ground should be loosened by thrusting an iron crow into it, to prevent the bark from being

torn off; and they should be planted at the least two feet deep. When cultivated by layers, the planting should take place in October, and they will then be ready to transplant in twelve months' time.

The Alder is usually planted as coppice wood, to be cut down every five or six years, for conversion into charcoal, which is preferred in making gunpowder. The bark on the young wood is powerfully astringent, and is employed by tanners; and the young shoots are used for dyeing red, brown, and yellow; and in combination with copperas, to dye black. It is greatly cultivated in Flanders and Holland for piles, for which purpose it is invaluable, as when constantly under water, or in moist and boggy situations, it becomes hardened, black as ebony, and will last for ages. On this account it is also very serviceable in strengthening the embankments of rivers or canals; and while the roots and trunks are preventing the encroachment of the stream, they throw out branches which may be cut for poles every fifth or sixth year, especially if pruned of superfluous shoots in the spring.

> As Alders in the spring, their boles extend,
> And heave so fiercely that the bark they rend.
>
> VIRGIL, *ecl.* x.

Vitruvius informs us, that the morasses about Ravenna were piled with this timber to build upon; and Evelyn says that it was used in the foundations of Ponte Rialto, over the Grand Canal at Venice. The wood is also valuable for various domestic purposes.

Besides the common Alder there are introduced at least six other species:—

1. *A. Glutinosa*, already described.

2. *Emarginata*, leaves nearly round, wedge-shaped, and edged with green.

3. *Laciniata*, leaves oblong and pinnatifid, with the lobes acute.

4. *Quercifolia*, leaves sinuated, with the lobes obtuse.

5. *Oxyacanthæfolia*, leaves sinuated and lobed; smaller than those of the preceding variety, and somewhat resembling the common hawthorn.

6. *Macrocarpa*, leaves and fruit larger than those of the species.

7. *Foliis variegatis*, leaves variegated.

THE ASH-TREE.

[*Fraxinus.** Nat. Ord.—*Oleaceæ*; Linn.—*Dian. Monog.*]

The Common Ash (*F. excelsior*), is one of the noblest of our forest-trees, and generally carries its principal stem higher than the oak, rising in an easy flowing line. Its chief beauty, however, consists

* *Generic characters.* Calyx none, or deeply 4-cleft. Corolla none, or of 4 petals. Perianth single, or none. Fruit a 2-celled, 2-seeded capsule, flattened and foliaceous at the extremity (a *samara*). Name from φραξις, separation, on account of the ease with which the wood may be split.

in the lightness of its whole appearance. Its branches at first keep close to the trunk, and form acute angles with it; but as they begin to lengthen, they commonly take an easy sweep; and the looseness of the leaves corresponding with the lightness of the spray, the whole forms an elegant depending foliage. Nothing can have a better effect than an old Ash hanging from the corner of a wood, and bringing off the heaviness of the other foliage with its loose pendent branches. And yet in some soils, the Ash loses much of its beauty in the decline of age. The foliage becomes rare and meagre; and its branches, instead of hanging loosely, start away in disagreeable forms; thus the Ash often loses that grandeur and beauty in old age, which the generality of trees, and particularly the oak, preserve till a late period of their existence.

The Ash also falls under the displeasure of the picturesque eye on another account, that is, from its leaf being much tenderer than that of the oak, it sooner receives impressions from the winds and frosts. Instead, therefore, of contributing its tint in the wane of the year among the many-coloured offspring of the woods, it shrinks from the blast, drops its leaf, and in each scene where it predominates, leaves wide blanks of desolated boughs, amidst foliage yet fresh and verdant. Before its decay, we sometimes see its leaf tinged with a fine yellow, well contrasted with the neighbouring greens. But this is one of Nature's casual beauties. Much oftener its leaf decays in a dark, muddy, unpleasing tint. And yet, sometimes,

notwithstanding this early loss of its foliage, we see the Ash, in a sheltered situation, when the rains have been abundant and the season mild, retain its light pleasant green, when the oak and the elm, in its neighbourhood, have put on their autumnal attire. The leaves of the common Ash were used as fodder for cattle by the Romans, who esteemed them better for that purpose than those of any other tree: and in this country, in various districts, they were used in the same manner.

The common Ash is indigenous to northern and central Europe, to the north of Africa, and to Japan. The Romans, it is said, named it *Fraxinus, quia facile frangitur*, to express the fragile nature of the wood, as the boughs of it are easily broken. It is supposed that the name of Ash has been given to this tree, because the bark of the trunk and branches is of the colour of wood ashes. Some, however, affirm that the word is derived from the Saxon *Æsc*, a pike.

It is recorded in the fables of the ancients, that Love first made his arrows of this wood. The disciples of Mars used ashen poles for lances:

> A lance of tough ground-Ash the Trojan threw,
> Rough in the rind and knotted as it grew. ÆNEID.

Virgil says that the spears of the Amazons were formed of this wood, and Homer sings the mighty ashen spear of Achilles:

> The noble Ash rewards the planter's toil;
> Noble, since great Achilles from her side
> Took the dire spear by which brave Hector died.
>
> RAPIN.

It is said, in the Edda, that the Ash was held in high veneration, and that man was formed from its wood. Hesiod, in like manner, deduces his brazen race of men from the Ash.

The warlike Ash, that reeks with human blood.

There are many remarkable Ash-trees in various parts of the country. One at Woburn Abbey measures at the ground twenty-three feet in circumference; at twelve inches from the ground, it is twenty feet; and fifteen feet three inches at three feet from the ground. It is ninety feet high, and the ground overshadowed by its branches is one hundred and thirteen feet in diameter. The trunk of another, near Kennety Church, in King's County, is twenty-one feet ten inches in circumference, and seventeen feet high, before the branches break out, which are of enormous bulk. There formerly stood in the churchyard of Kilmalie, in Lochaber, an Ash that was considered the largest and most remarkable tree in the Highlands. Lochiel and his numerous kindred and clan held it in great veneration for generations, which is supposed to have hastened its destruction; it being burnt to the ground by the brutal soldiery in 1746. In one direction its diameter was seventeen feet three inches, and the cross diameter twenty-one feet; its circumference at the ground was fifty-eight feet!

Trees raised from the keys of the Ash are decidedly the best. The "keys," or tongues, should be gathered from a young thriving tree when they begin to fall (which is about the end of October),

Specific characters of F. excelsior. *Common Ash.* Leaves pinnate, with lanceolate, serrated leaflets: flowers destitute of calyx and corolla. In old trees, the lower branches, after bending downwards, curve upwards at their extremities. Flowers, in loose panicles: anthers large, purple: capsules with a flat leaf-like termination, generally of two cells, each containing a flat oblong seed. This beautiful tree assumes its foliage later than any of our trees, and loses it early. A *variety* occurs with simple leaves, and another with pendulous branches. Flowers in April and May; grows in natural woods in many parts of Scotland.

laid to dry, and then sown any time betwixt that and Christmas. They will remain a full year in the ground before they appear; it is therefore necessary to fence them in, and wait patiently. The Ash will grow exceedingly well upon almost any soil, and indeed is frequently met with in ruined walls and rocks, insinuating its roots into the crevices of decaying buildings, covering the surface with verdure, while it is instrumental in destroying that which yields it support. Its winged capsules are supposed to be deposited in those places by the wind.

> The Ash asks not a depth of fruitful mould,
> But, like frugality, on little means
> It thrives, and high o'er creviced ruins spreads
> Its ample shade, or in the naked rock,
> That nods in air, with graceful limbs depends.
>
> BIDLAKE.

Southey, in *Don Roderick*, speaks of the Ash:

> — amid the brook,
> Gray as the stone to which it clung, half root,
> Half trunk, the young Ash rises from the rock,
> And there its parent lifts its lofty head,
> And spreads its graceful boughs; the passing wind
> With twinkling motion lifts the silent leaves,
> And shakes its rattling tufts.

The roots of the Ash are remarkably beautiful, and often finely veined, and will take a good polish. There are also certain knotty excrescences in the Ash, called the *brusca*, and *mollusca*, which, when cut and polished, are very beautiful. Dr. Plot, in his *History of Oxfordshire* mentions a dining-table

made of them, which represented the exact figure of a fish.

With the exception of that of the oak, the timber of the Ash serves for the greatest variety of uses of any tree in the forest. It is excellent for ploughs.

> Tough, bending Ash,
> Gives to the humble swain his useful plough,
> And for the peer his prouder chariot builds.
>
> DODSLEY.

It is also used for axle-trees, wheel-rings, harrows; and also makes good oars, blocks for pulleys, &c. It is of the utmost value to the husbandman for carts, ladders, &c., and the branches are very serviceable for fuel, either fresh or dry. The most profitable age for felling the Ash, appears to be from eighty to one hundred years. It will continue pushing from stools or from pollards, for above one hundred years.

Though a handsome tree, it ought by no means to be planted for ornament in places designed to be kept neat, because the leaves fall off, with their long stalks, very early in the autumn, and by their litter destroy the beauty of such places; yet, however unfit for planting near gravel-walks, or pleasure-grounds, it is very suitable for woods, to form clumps in large parks, or to be set out as standards. It should never be planted on tillage land, as the dripping of the leaves injures the corn, and the roots tend to draw away all nourishment from the ground. Neither should it be planted near pasture ground; for if the kine eat the leaves or shoots, the butter will become rank, and of little value.

There are many varieties of the common Ash, but that with pendulous branches is probably the best known: it is called the Weeping Ash, and is of a heavy and somewhat unnatural appearance, yet it is very generally admired.

The foliage of the Ash-tree becomes of a brown colour in October.

> Like leaves on trees the race of man is found—
> Now green in youth, now withering on the ground;
> Another race the following spring supplies,
> They fall successive, and successive rise:
> So generations in their course decay,
> So flourish these, when those are past away.
>
> POPE.

There are numerous species of the Ash, but these are so rarely to be met with in this country, that it is not necessary to particularize any of them.

THE BEECH-TREE.

[*Fagus.** Nat. Ord.—*Amentiferæ;* Linn.—*Monœc. Poly.*]

THE Common Beech (*F. sylvatica*), is supposed to be indigenous to England, but not to Scotland or Ireland. According to Evelyn, it is a beautiful as well as valuable tree, growing generally to a greater stature than the Ash: though Gilpin observes, that it does not deserve to be ranked

* *Generic characters.* *Barren* flowers in a roundish catkin. Perianth campanulate, divided into 5 or 6 segments. Stamens 8 to 15. *Fertile* flowers, 2 together, within a 4-lobed prickly involucre. Stigma 3. Ovaries 3-cornered and 3-celled. Nut by abortion 1 or 2-seeded. Named from φαγω, to eat.

among timber-trees; its wood being of a soft, spongy nature, sappy, and alluring to the worm. Neither will Gilpin allow that, in point of picturesque beauty, it should rank much higher than in point of utility. Its skeleton, compared with that of the oak, the ash, or the elm, he says, is very deficient; yet its trunk is often highly picturesque, being frequently studded with bold knobs and projections, and having sometimes a sort of irregular fluting about it, which is very characteristic. It has another peculiarity, also, which is somewhat pleasing—that of a number of stems arising from the root. The bark, too, wears often a pleasant hue. It is naturally of a dingy olive; but it is always overspread, in patches, with a variety of mosses and lichens, which are commonly of a lighter tint in the upper parts, and of a deep velvet green towards the root. Its smoothness, also, contrasts agreeably with these rougher appendages. No bark tempts the lover so much to make it the depository of his mistress's name. In days of yore, it seems to have commonly served as the lover's tablet. In Dryden's translation of Virgil's *Eclogues*, we find the following:—

> Or shall I rather the sad verse repeat,
> Which on the Beech's bark I lately writ—
> I writ, and sang betwixt.

There seems to have been connected with this custom the curious idea, that as the tree increased in growth, so would the words, and also the hopes expressed thereon:

> The rind of every plant her name shall know,
> And as the rind extends the love shall grow.

Our own Thomson, too, narrates that Musidora carved, on the soft bark of a Beech-tree, the confession of her attachment to Damon:

> At length, a tender calm,
> Hushed, by degrees, the tumult of her soul;
> And on the spreading Beech, that o'er the stream
> Incumbent hung, she, with the sylvan pen
> Of rural lovers, this confession carved,
> Which soon her Damon kissed with weeping joy.

The branches of the Beech are fantastically wreathed and disproportioned, twining awkwardly among one another, and running often into long unvaried lines, without any of that strength and firmness which we admire in the oak, or of that easy simplicity which pleases in the ash: in short, we rarely see a Beech well ramified. In full leaf, it is unequally pleasing; it has the appearance of an overgrown bush. Virgil, indeed, was right in choosing the Beech for its shade. No tree forms so complete a roof. If you wish either for shade or shelter, you will find it best

> Beneath the shade which Beechen boughs diffuse.

Its bushiness imparts a great heaviness to the tree, which is always a deformity:

> A gloomy grove of Beech.

Sometimes a light branch issues from a heavy mass; and though these are often beautiful in themselves, they are seldom in harmony with the tree. They distinguish, however, its character, which will be best seen by comparing it with the elm. The latter

has a rounder, the former a more pointed foliage; but the elm is always in harmony with itself. Gilpin can see few beauties in the Beech; but, in conclusion, he admits that it sometimes has its beauty, and often its use. In distance, it preserves the depth of the forest, and, even on the spot, in contrast, it is frequently a choice accompaniment. In the corner of a landscape, too, when a thick heavy tree is wanted, or a part of one, at least, which is often necessary, nothing answers the purpose like the Beech.

If we would really appreciate the beauty of this tree, we should walk in a wood of them. In its juvenility, contrary to the generality of trees, the Beech is decidedly the most pleasing, not having acquired that heaviness which Gilpin so loudly complains of. A light, airy young Beech, with its spiry branches hanging in easy forms, is generally beautiful. And, occasionally, the forest Beech, in a dry hungry soil, preserves the lightness of youth in the maturity of age.

We must, however, mention its autumnal hues, which are often beautiful. Sometimes it is dressed in modest brown, but commonly in glowing orange; and in both dresses its harmony with the grove is pleasing. About the end of September, when the leaf begins to change, it makes a happy contrast with the oak, whose foliage is yet verdant. Some of the finest oppositions of tint which, perhaps, the forest can furnish, arise from the union of oak and Beech. We often see a wonderful effect from this combination; and yet, accommodating as its

leaf is in landscape, on handling, it feels as if it were fabricated with metallic rigour.

The leaves are of a pleasant green, and many

Specific character. *F. sylvática.* *Common Beech.* Leaves ovate, indistinctly serrate, smooth, ciliate. A large tree, varying from 60 to 100 feet in height, with smooth bark and spreading branches. Flowers in April and May; grows in woods, particularly on calcareous soils.

of them remain on the branches during winter. In France and Switzerland, when dried, they are very commonly used for beds, or, instead of straw, for mattresses. Its fruit consists of "two nuts joined at the base, and covered with an almost globular involucre, which has soft spines on the outside, but within is delicately smooth and silky." Beech mast, as it is called, was formerly used for fattening swine and deer. It affords also a sweet oil, which the poor in France are said to eat most willingly.

— The Beech, of oily nuts
Prolific.

The Beech abounds especially along the great ridge of chalk-hills which passes from Dorsetshire through Wiltshire, Hampshire, Surrey, Sussex, and Kent; trenching out into Berkshire, Buckinghamshire, and Hertfordshire; and it is also found on the Stroudwater and Cotswold hills in Gloucestershire, and on the banks of the Wye in Herefordshire and Monmouthshire. It is particularly abundant in Buckinghamshire, where it forms extensive forests of great magnificence and beauty. It is seldom found mixed with other trees, even when they are coeval with it in point of age. It is rarely found in soil that is not more or less calcareous; and it most commonly abounds on chalk. The finest trees in England are said to grow in Hampshire; and there is a curious legend respecting those in the forest of St. Leonard, in that county. This forest, which was the abode of St. Leonard, abounds in noble Beech-trees; and the

saint was particularly fond of reposing under their shade; but, when he did so, he was annoyed during the day by vipers, and at night by the singing of the nightingale. Accordingly, he prayed that they might be removed; and such was the efficacy of his prayers, that since his time, in this forest,

> "The viper has ne'er been known to sting,
> Or the nightingale e'er heard to sing."

The wood of this tree, from its softness, is easy of being worked, and is consequently a favourite with the turner. Beechen bowls, curiously carved, were highly prized by the ancient shepherds. Indeed, we learn that their use was almost universal:

> Hence, in the world's best years, the humble shed
> Was happily and fully furnished:
> Beech made their chests, their beds, and the joined stools;
> Beech made the board, the platters, and the bowls.

And it is still used for dishes, trays, trenchers, &c. And Dodsley informs us that it was used for the sounding-boards of musical instruments.

> — The soft Beech
> And close-grained box employ the turner's wheel;
> And with a thousand implements supply
> Mechanic skill.

We cannot willingly conclude this article without introducing Wordsworth's beautiful description of a solitary Beech-tree, which stood within "a stately fir-grove," where he was not loth

> To sympathize with vulgar coppice birds,
> That, for protection from the nipping blast,

Thither repaired. A single Beech-tree grew
Within this grove of firs, and in the fork
Of that one Beech appeared a thrush's nest:
A last year's nest, conspicuously built
At such small elevation from the ground,
As gave sure sign that they who in that house
Of nature and of love had made their home,
Amid the fir-trees all the summer long,
Dwelt in a tranquil spot.

The principal varieties of the Beech are:—

1. *Purpurea*, the purple Beech, which has the buds and young shoots of a rose colour; the leaves, when half developed, of a cherry red, and of so dark a purple, when fully matured, as to appear almost black.

2. *Foliis variegatis*, having the leaves variegated with white and yellow, interspersed with some streaks of red and purple.

3. *Pendulata*, the weeping Beech, having the branches beautifully pendent.

THE BIRCH-TREE.

[*Betula.** Nat. Ord.—*Amentiferæ*; Linn.—*Monœc. Poly.*]

— most beautiful
Of forest trees, the lady of the woods. COLERIDGE.

THE common Birch (*B. alba*) is a native of the colder regions of Europe and Asia, being found from Iceland to Mount Etna; in Siberia, as far as

* *Generic characters.* *Barren* flowers in a cylindrical catkin with ternate scales. Perianth none. Stamens 10 or 12. *Fertile* flowers in an oblong catkin, with 3-lobed, 3-flowered scales. Perianth none. Styles 2, filiform. Fruit an oblong nut, deciduous, winged, 1-celled. Kernel solitary.

the Altaic mountains; and also in the Himalayas; but not in Africa. It is known, at first sight, by the silvery whiteness of its bark, the comparative smallness of its leaves, and the lightness and airiness of its whole appearance. It is admirably calculated to diversify the scene, forming a pleasing variety among other trees, either in summer or winter. In summer it is covered over with beautiful small leaves, and the stem being generally marked with brown, yellow, and silvery touches of a peculiarly picturesque character, as they are characteristic objects of imitation for the pencil, forms an agreeable contrast with the dark-green hue of the foliage, as it is waved to and fro by every breath of air. Only the stem and larger branches, however, have this varied colouring: the spray is of a deep brown, which is the colour, too, of the larger branches, where the external rind is peeled off. As the tree grows old, its bark becomes rough and furrowed; it loses all its varied tints, and assumes a uniform ferruginous hue.

The Birch is altogether raised from roots or suckers, which, being planted at intervals of four or five feet, in small twigs, will speedily rise to trees, provided the soil suit them, and this cannot well be too barren or spongy; for it will thrive in dry and wet, sandy or stony places, in marshes or bogs.

In ancient times, the Birch, whose timber is almost worthless, according to Evelyn, afforded the Old English warriors arrows, bolts, and shafts; and in modern times, its charcoal forms a principal

Specific characters of B. alba. Leaves ovate, deltoid, acute, unequally serrate, nearly smooth. A moderately-sized tree, seldom exceeding fifty feet in height, with a trunk of from twelve to eighteen inches in diameter, with a white outer bark, peeling transversely, the twigs very slender, and more or less drooping. Flowers in April and May; grows abundantly in extensive natural woods in various parts of the country, particularly in the Highlands of Scotland.

ingredient in the manufacture of gunpowder. In spring, the Birch abounds in juices, and from these the rustic housewife makes an agreeable and wholesome wine: as Warton sings:

> And though she boasts no charm divine,
> Yet she can carve, and make Birch wine.

Pomona's bard says, also, that

> — Even afflictive Birch,
> Cursed by unlettered idle youth, distils
> A limpid current from her wounded bark,
> Profuse of nursing sap.

We are informed that a Birch-tree has been known to yield, in the course of the season, a quantity of sap equal to its own weight. It is obtained by inserting, in the early part of spring, a fosset made of an elder stick, with the pith taken out; and setting vessels, or hanging bladders, to receive the liquor. The sooner it is boiled the better; so that, in order to procure a sufficient quantity in a short time, a number of trees should be bored on the same day, and two or three fossets inserted in each of the larger trees. Sugar is now commonly used to sweeten it, in the proportion of from two to four pounds to each gallon of liquor. This is allowed to simmer so long as any scum rises, which must be cleared as fast as it appears. It is then poured into a tub to cool, after which it is tunned into a cask, and bunged up when it has done working; and is ready to be drunk when a year old.

As before remarked, the timber of the Birch is

of little value; though in the Highlands, where pine is not to be had, it is used for all purposes. Its stems form the rafters of cabins; "wattles of the boughs are the walls and the door; and even the chests and boxes are of this rude basket-work."

Light and strong canoes were formerly made of this timber in Britain, and also in other parts of Europe; and are even now in the northern parts of America. It also makes good fuel; and in Lancashire great quantities of besoms are made for exportation from the slender twigs. The bark is used in Russia and Poland for the covering of houses, instead of slates or tiles; and anciently the inner white cuticle and silken bark were used for writing-paper. Coleridge describes

> A curious picture, with a master's haste
> Sketched on a strip of pinky-silver skin
> Peeled from the Birchen bark.

There is no part of this tree, however, that is not useful for some purpose or other. Even its leaves are used by the Finland women, in forming a soft elastic couch for the cradle of infancy.

Gilpin particularly notes a beautiful variety of the White Birch, *B. pendula*, sometimes called the Lady Birch, or the Weeping Birch. Its spray being slenderer and longer than the common sort, forms an elegant pensile foliage, like the weeping willow, and, like it, is put in motion by the smallest breeze. When agitated, it is well adapted to characterize a storm, or to perform any office in landscape which is expected from the weeping willow. This is agreeably described in Wilson's Isle of Palms:

— on the green slope
Of a romantic glade we sate us down,
Amid the fragrance of the yellow broom,
While o'er our heads the Weeping Birch-tree streamed
Its branches, arching like a fountain shower.

"A Weeping Birch, at Balloghie, in the parish of Birse, in Aberdeenshire, in 1792, measured five feet in circumference; but it carried nearly this degree of thickness, with a clear stem, up to the height of about fifty feet, and it was judged to be about one hundred feet high."

THE CEDAR OF LEBANON.

[*Cedrus Libani.* Nat. Ord.—*Coniferæ;* Linn.—*Pinus C. Monœc. Monand.*]

On high the Cedar
Stoops, like a monarch to his people bending,
And casts his sweets around him.

BARRY CORNWALL.

THE Cedar of Lebanon is a majestic evergreen tree, generally from fifty to eighty feet in height, extending wide its boughs and branches; and its sturdy arms grow in time so weighty, as frequently to bend the very stem and main shaft. Phillips observes, that "this noble tree has a dignity and a general striking character of growth so peculiar to itself, that no other tree can possibly be mis-

taken for it. It is instantly recognized by its wide-extending branches, that incline their extremities downwards, exhibiting a most beautiful upper surface, like so many verdant banks, which, when agitated by the wind, play in the most graceful manner, forming one of the most elegant, as well as one of the most noble, objects of the vegetable kingdom."

The Cedar of Lebanon was formerly supposed to grow nowhere but on that mountain; but it was discovered, in 1832, on several mountains of the same group, and the probability is, that it extends over the whole of the Tauri mountains. It has also been discovered on the Atlas range of northern Africa.

It is generally spoken of as a lofty tree. Milton, in speaking of it, says,

> Insuperable height of loftiest shade.

And Rowe, in his Lucan, alludes to the "tall Cedar's head;" and Spenser speaks of the "Cedar tall;" and Churchill sings,

> The Cedar, whose top mates the highest cloud.

Notwithstanding these poetical authorities for the loftiness of the Cedar, we are assured by Evelyn, and others, that it is not lofty, but is rather remarkable for its wide-spreading branches. In Prior's Solomon, we read of

> The spreading Cedar that an age had stood,
> Supreme of trees, and mistress of the wood,
> Cut down and carved, my shining roof adorns,
> And Lebanon his ruined honour mourns.

Mason describes it as far-spreading:

> — Cedars here,
> Coeval with the sky-crowned mountain's self,
> Spread wide their giant arms.

The prophet Ezekiel has given us the fullest description of the Cedar: "Behold the Assyrian was a Cedar in Lebanon, with fair branches, and with a shadowing shroud, and of a high stature; and his top was among the thick boughs. His boughs were multiplied, and his branches became long. The fir-trees were not like his boughs, nor the chestnut-trees like his branches, nor any tree in the garden of God like unto him in beauty."

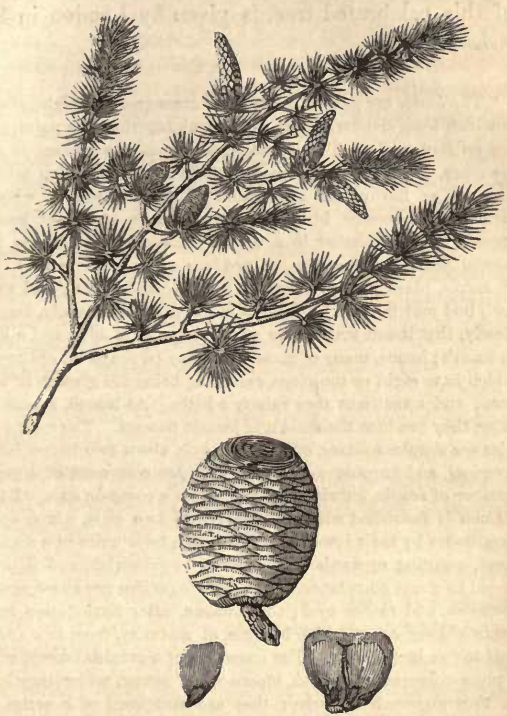
In this description, two of the principal characteristics of the Cedar are marked.

The first is, the multiplicity and length of his branches. Few trees divide so many fair branches from the main stem, or spread over so large a compass of ground. His boughs are multiplied, as Ezekiel says, and his branches become long, which David calls spreading abroad.

The second characteristic is his shadowing shroud. No tree in the forest is more remarkable than the Cedar for its close-woven leafy canopy. Ezekiel's Cedar is marked as a tree of full and perfect growth, from the circumstance of its top being among the thick boughs. Almost every young tree, and particularly every young Cedar, has what is called a leading branch or two, which continue spiring above the rest till the tree has attained its full size; then the tree becomes, in the language

of the nurseryman, clump-headed: but, in the language of eastern sublimity its top is among the thick boughs; that is, no distinction of any spiry head, or leading branch, appears; the head and the branches are all mixed together. This is generally, in all trees, the state in which they are most perfect and most beautiful. Such is the grandeur and form of the Cedar of Lebanon. Its mantling foliage, or shadowing shroud, as Ezekiel calls it, is its greatest beauty, which arises from the horizontal growth of its branches forming a kind of sweeping, irregular penthouse. And when to the idea of beauty that of strength is added, by the pyramidal form of the stem, and the robustness of the limbs, the tree is complete in all its beauty and majesty. In these climates, indeed, we cannot expect to see the Cedar in such perfection. The forest of Lebanon is, perhaps, the only part of the world where its growth is perfect; yet we may, in some degree, conceive its beauty and majesty, from the paltry resemblances of it at this distance from its native soil. In its youth, it is often with us a vigorous thriving plant; and if the leading branch is not bound to a pole (as many people deform their Cedars), but left to take its natural course, and guide the stem after it in some irregular waving line, it is often an object of great beauty. But, in its maturer age, the beauty of the English Cedar is generally gone; it becomes shrivelled, deformed, and stunted; its body increases, but its limbs shrink and wither. Thus it never gives us its two leading qualities together.

In its youth, we have some idea of its beauty, without its strength; and in its advanced age, we have



some idea of its strength, without its beauty. The imagination, therefore, by joining together the two different periods of its age in this climate, may form some conception of the grandeur of the Cedar

in its own climate, where its strength and beauty are united.

The following particular botanical description of this celebrated tree, is given by Loudon in his *Arboretum* :—

"The *leaves* are generally of a dark grass green, straight, about one inch long, slender, nearly cylindrical, tapering to a point, and are on foot-stalks. The leaves, which remain two years on the branches, are at first produced in tufts; the buds from which they spring having the appearance of abortive shoots, which, instead of becoming branches, only produce a tuft of leaves pressed closely together in a whorl. These buds continue, for several years in succession, to produce every spring a new tuft of leaves, placed above those of the preceding year; and thus each bud may be said to make a slight growth annually, but so slowly, that it can scarcely be perceived to have advanced a line in length; hence, many of these buds may be found on old trees, which have eight or ten rings, each ring being the growth of one year; and sometimes they ramify a little. At length, sooner or later, they produce the male and female flowers. The *male catkins* are simple, solitary, of a reddish hue, about two inches long, terminal, and turning upwards. They are composed of a great number of sessile, imbricated stamens, on a common axis. Each stamen is furnished with an anther with two cells, which open lengthwise by their lower part; and each terminates in a sort of crest, pointing upwards. The pollen is yellowish, and is produced in great abundance. The *female catkins* are short, erect, roundish, and rather oval; they change, after fecundation, into ovate oblong *cones*, which become, at maturity, from two and a half to five inches long. The cones are of a grayish brown, with a plum-coloured or pinkish bloom when young, which they lose as they approach maturity; they are composed of a series of coriaceous imbricated *scales*, laid flat, and firmly pressed against each other in an oblique spiral direction. The scales are very broad, obtuse, and truncated at the summit; very thin, and slightly denticulated at the edge; and reddish and shining on the flat part. Each scale contains two seeds, each surmounted by a very thin membranous *wing*, of which the upper part is very broad, and the lower narrow, enveloping the greater part of the

seed. The cones are very firmly attached to the branches; they neither open nor fall off, as in the other Abietinæ; but, when ripe, the scales become loose, and drop gradually, leaving the axis of the cone still fixed on the branch. The *seeds* are of an irregular, but somewhat triangular form, nearly one and a half inch long, of a lightish brown colour. Every part of the cone abounds with resin, which sometimes exudes from between the scales. The female catkins are produced in October, but the cones do not appear till the end of the second year; and, if not gathered, they will remain attached to the tree for several years. The Cedar of Lebanon does not begin to produce cones till it is twenty-five or thirty years old; and, even then, the seeds in such cones are generally imperfect; and it is not till after several years of bearing, that seeds from the cones of young trees can be depended upon. Some Cedars produce only male catkins, and these in immense abundance; others, only female catkins; and some both. There are trees of vigorous growth at various places, which, though upwards of one hundred years old, have scarcely ever produced either male or female catkins. The duration of the Cedar is supposed to extend to several centuries."

The Cedar is cultivated from seeds and berries. Any climate suits it, provided it meet with a sandy soil; though it grows better in cold than in warm climates, as its cultivation is more successful in Scotland than in England.

The peculiar property of its timber is extremely remarkable, being declared proof against all putrefaction of human or other bodies, serving better than all other ingredients or compositions for embalming; thus, by a singular contradiction, giving life as it were to the dead, and destroying the worms which are living, as it does, where any goods are kept in chests and presses of the wood—except woollen cloths and furs, which, it is observed, they destroy. Its preservative power is attributed to the bitterness of its resinous juices. The ancients,

in praising any literary work, would say, "It is worthy of being cased in Cedar." It is also very durable, it being on record that in the Temple of Apollo, at Utica, there was found timber of near two thousand years old.

The most remarkable existing Cedars in this country are at Chelsea, at Enfield, at Chiswick House, at Sion House, at Strathfieldsaye, at Charley Wood near Rickmansworth, at Wilton, near Salisbury and at Osgood Hanbury's near Coggeshall. The largest of these, at Strathfieldsaye, is one hundred and eight feet in height; diameter of the trunk, three feet, and diameter of the head, seventy-four feet.

THE SWEET CHESTNUT-TREE.

[*Castanea vulgaris.* Nat. Ord.—*Amentiferæ;* Linn.—*Monœc. Poly.*]

The Sweet Chestnut, so called with reference to the fruit, in contradistinction to that of the Horse-Chestnut, which is bitter, is also called the Spanish Chestnut, because the best chestnuts for the table are imported from Spain. In favourable situations, it becomes a magnificent tree, though it never attains a height, or diameter of head, equal to that of the oak. The trunk generally rises erect, forming, in all cases, a massy column of wood, in proportion to the expansion of the head, or the height

of the tree. The branches form nearly the same angle with the trunk as those of the oak; though in thriving trees the angle is somewhat more acute. If planted in woods, by the road-side, and left untrimmed, as they should be, they will be feathered to the bottom, and will in summer, in addition to their beautiful appearance, hide the naked stems of other trees which are considered disagreeable objects; while in autumn, the golden hue of the leaves will heighten the mellow and pleasing effect produced in the woodlands by the variety of hues in the foliage of different trees, which contrast and blend together in one harmonious and pictorial aspect.

The Chestnut has been considered indigenous; but this is the more doubtful, that the tree rarely ripens its fruit, except in a climate that will ripen the grape in the open air. On old trees, the leaves are from four to six inches long; but on young and vigorous shoots, they are often nearly twelve inches in length, and from three to four inches in breadth. They are of a rich shining green above, and paler beneath. The flowers are produced on the wood of the current year, and are ranged along the common stalk, in lateral sessile tufts. The rate of growth of young trees, in the neighbourhood of London, averages from two to three feet for the first ten or twelve years. The tree will attain the height of from sixty to eighty feet in about sixty years; but the tree will live for several centuries afterwards, and produce abundance of fruit. The finest trees in England are said to stand on the

* *Generic characters of the Castaneæ.* *Barren* flowers in a long cylindrical spike. Perianth 6-cleft. Stamens 8 to 20. *Fertile* flowers, 3 within a 4-lobed muricated involucre. Stigmas 3 to 8. Ovary 5 to 8-celled. Nuts 1 or 2, within the enlarged prickly involucre.

Specific characters of C. vulgaris. Leaves lanceolate, acutely serrate, smooth beneath; prickles compound and entangled; stigmas 6.

banks of the Tamer, in Cornwall; and at Beechworth Castle, in Surrey, there are seventy or eighty Chestnuts, measuring from twelve to eighteen or twenty feet in girth, and some of them very picturesque in form. One, on Earl Durie's estate of Tortworth, in Gloucestershire, is proved to have stood ever since 1150, and to have been then remarkable for its age and size.

The Chestnut is cultivated best by sowing and setting: the nuts must, however, be left to sweat, and then be covered with sand; after having been thus heated for a month, plunge the nuts in water, and reject the swimmers; then dry them for thirty days, and repeat the process. In November, set them as you would beans, taking care to do it in their husks. This tree will thrive in almost all soils and situations, though it succeeds best in rich loamy land. Nothing will thrive beneath its shade. Among mast-bearing trees this is said to be the most valuable; since the nuts, when ripened in southern climates, are considered delicacies for princes. In this country, however, where they rarely come to maturity, they fall to the lot of hogs and squirrels. The trees cultivated for fruit are generally grafted; and, in several parts of South Europe, the peasantry are mainly supported by bread made of the nut-flour. In Italy, in Virgil's time, they ate them with milk and cheese:

> Chestnuts, and curds and cream shall be our fare.

And again, in his second *Pastoral*, thus translated by Dryden:

Myself will search our planted grounds at home,
For downy peaches and the glossy plum;
And thrash the Chestnuts in the neighbouring grove,
Such as my Amaryllis used to love.

The timber of the Chestnut is strong and very durable; but it is often found decayed at the core, and, in working, is very brittle. The wood is preferred for the manufacture of liquor tubs and vessels, as it does not shrink after being once seasoned. This tree is now, however, chiefly grown for hop-poles, which are the straightest, tallest, and most durable. Though cut at an early age for this purpose, the trees are frequently ornaments of our parks and pleasure-grounds.

THE ELM-TREE.

[*Ulmus.** Nat. Ord.—*Ulmaceæ;* Linn.—*Pentand. Digy.*]

> There stood the Elme, whose shade, so mildly dim,
> Doth nourish all that groweth under him.
>
> W. Browne.

The Common Elm (*U. campestris*), after having assumed the dignity and hoary roughness of age, is not excelled in grandeur and beauty by any of its brethren. In this latter stage, it partakes so much of the character of the oak, that it is easily

* *Generic characters of the Ulmi.* Calyx campanulate, inferior, 4 to 5-cleft, persistent. Corolla none. Fruit a membranous, compressed, winged capsule (a *samara*), 1-seeded.

mistaken for it; though the oak—such an oak as is strongly marked with its peculiar character—can never be mistaken for the Elm. "This defect, however," says Gilpin, "appears chiefly in the skeleton of the Elm. In full foliage, its character is better marked. No tree is better adapted to receive grand masses of light. In this respect, it is superior both to the oak and the ash. Nor is its foliage, shadowing as it is, of the heavy kind. Its leaves are small, and this gives it a natural lightness; it commonly hangs loosely, and is in general very picturesque."

The Elm is not frequently met with in woods or forests, but is more commonly planted in avenues or other artificial situations. Cowper very accurately sketches the variety of form in the Elm, and alludes to the different sites where they are to be found. In the *Task*, he first introduces them rearing their lofty heads by the river's brink:

> —There, fast rooted in his bank,
> Stand, never overlooked, our favourite Elms,
> That screen the herdsman's solitary hut.

Then he gives us an enchanting scene, where a lowly cot is surrounded by them:

> 'Tis perched upon the green hill-top, but close
> Environed with a ring of branching Elms,
> That overhang the thatch.

He then introduces us to a grove of Elms:

> —The grove receives us next;
> Between the upright shafts of whose tall Elms
> We may discern the thrasher at his task.

The Elm is frequently referred to by the poets. Wordsworth thus speaks of a grove of them:

> Upon that open level stood a grove,
> The wished-for port to which my course was bound.
> Thither I came, and there, amid the gloom
> Spread by a brotherhood of lofty Elms,
> Appeared a roofless hut.

In *The Church Yard among the Mountains*, he introduces one that seems to be the pride of the village:

> —A wide-spread Elm
> Stands in our valley, named the JOYFUL TREE;
> From dateless usage which our peasants hold
> Of giving welcome to the first of May,
> By dances round its trunk.

And again:

> —The JOYFUL ELM,
> Around whose trunk the maidens dance in May.

Dr. Hunter supposes that the Elm is a native of England. Philips, however, does not agree with this; but, admitting that the tree was known in England as early as the Saxon times, observes, that this does not prove the Elm to be indigenous to the soil, confuted as it is by Nature, which rarely allows it to propagate its species in this country according to her common rules; while in other countries, where the seed falls, young plants spring up as commonly as the oaks in Britain.

In favourable situations, the common Elm becomes a large timber tree, of considerable beauty and utility, naturally growing upright. It is the first tree to put forth its light and cheerful green

in spring, a tint which contrasts agreeably with the foliage of the oak, whose leaf has generally,

Specific characters of U. campestris. Leaves rhomboid-ovate, acuminate, wedge-shaped, and oblique at the base, always scabrous above, doubly and irregularly serrated, downy beneath; serratures incurved. Branches wiry, slightly corky; when young, bright brown, pubescent. Fruit oblong, deeply cloven, naked.

in its early state, more of an olive cast. We see them often in fine harmony together about the end of April and the beginning of May. The Elm is also frequently found planted with the Scotch fir. In spring, its light green is very discordant with the gloomy hue of its companion; but as the year advances, the Elm leaf takes a darker tint, and unites in harmony with the fir. In autumn also, the yellow leaf of the Elm mixes as kindly with the orange of the beech, the ochre of the oak, and many of the other fading hues of the wood.

The Elm was considered by the ancients of Eastern nations as a funereal tree, as well as the cypress. It is celebrated in the *Iliad*, for having formed a hasty bridge, by which Achilles escaped the Xanthus, when that river, by its overflowing, placed him in danger of being carried away. It has been suggested that the Romans probably introduced it, and planted it on the graves of their departed heroes. It was well known among the Latins. Virgil says, that the husbandmen bent the young Elm, whilst growing, into the proper shape, for their *buris* or plough-tail:

> Young Elms with early force in copses bow,
> Fit for the figure of the crooked plough.
>
> DRYDEN.

The Romans esteemed the Elm to be the natural support and friend of the vine; and the feeling that a strong sympathy subsisted between plants, led them never to plant one without the other. The gravest of Latin authors speak of the

Elm as husband of the vine; and Pliny tells us, that that Elm is a poor spouse that does not support three vines. This mode of marrying the vine to the Elm gave rise to the elegant insinuation of Vertumnus to Pomona, whose story may be found in Ovid:

"If that fair Elm," he cried, "alone should stand,
No grapes would glow with gold, and tempt the hand:
Or, if that vine without her Elm should grow,
'T would creep a poor neglected shrub below."

This union of the vine and the Elm is constantly alluded to by the poets. Tasso, as translated by Fairfax, says,

The married Elm fell with his fruitful vine.

The lofty Elm with creeping vines o'erspread.
OVID.

Milton, narrating the occupations of Adam and Eve before the fall, sings,

—They led the vine
To wed her Elm; she, spoused, about him twines
Her marriageable arms, and with her brings
Her dower, the adopted clusters, to adorn
His barren leaves.

And Beaumont says,

—The amorous vine
Did with the fair and straight-limbed Elm entwine.

And Wordsworth, in that beautiful reflection, the *Pillar of Trajan*, speaks of it:

So, pleased with purple clusters to entwine
Some lofty Elm-tree, mounts the daring vine.

There is a beautiful group of Elms at Mongewell, Oxon, which are in full vigour. The principal one is seventy-nine feet high, fourteen feet in girth at three feet from the ground, sixty-five in extent of boughs, and contains two hundred and fifty-six feet of solid timber. Strutt informs us, that, in 1830, Dr. Barrington, the venerable Bishop of Durham, when in his ninetieth year, erected an urn in the midst of their shade, to the memory of two of his friends; inscribing thereon the following classical fragment:

> In this once-favoured walk, beneath these Elms,
> Where thickened foliage, to the solar ray
> Impervious, sheds a venerable gloom,
> Oft in instructive converse we beguiled
> The fervid time, which each returning year
> To friendship's call devoted. Such things were;
> But are, alas! no more.

The Chipstead Elm, in Kent, which is an English tree, is a fine specimen; and is of an immense size. It is beautiful as to form, and its trunk is richly mantled with ivy. In Henry V.'s time, the high road from Rye to London passed close by it, and a fair was held annually under its branches.

At Sprotborough, Yorkshire, stands what is justly regarded as the pride of the grounds—a magnificent English Elm. This noble tree is about fifteen feet in circumference in the bole, and still thicker at the height of four feet from the ground, where it divides into five enormous boughs, each of the size of a large tree, and gracefully descending to the ground; the whole forming a splendid

mass of foliage, having a diameter of about forty yards from bough to bough end.

The Elm is generally raised by means of suckers, rarely from seeds. It delights in a rich, loamy soil, thriving best in an open situation, and bears transplantation well. It may also be planted in good pasture grounds, as it does not injure the grass beneath; and its leaves are agreeable to cattle, which in some countries are chiefly supported by them. They will eat them before oats, and thrive well upon them. Evelyn says, that in Herefordshire the inhabitants gathered them in sacks for their swine and other cattle.

Fruitful in leaves the Elm.

So prolific is this tree in leaves, that it affords a constant shade during the summer months, and for this reason it has been planted in most of the public and royal gardens in Europe. It is also of quick growth, as it will yield a load of timber in little more than forty years: it does not, however, cease growing—if planted in a favourable situation—neither too dry nor too moist—till it is one hundred or one hundred and fifty years old; and it will live several centuries.

The wood of the Elm is hard and tough, and is greatly esteemed for pipes that are constantly under ground. In London, before iron pipes were used, the consumption of this timber for water-pipes was enormous. It is also valuable for keels, and planking beneath the water-line of ships, and for mill-wheels and water-works. When long bows

were in fashion it was used in their manufacture, and the Statutes recommend it for that purpose.

Besides *U. campestris* there are six other varieties which have been long naturalized in this country, the botanical descriptions of which are :—

2. *U. suberosa.* Ehr. Leaves nearly orbicular, acute, obliquely cordate at the base, sharply, regularly, and doubly serrate; always scabrous above, pubescent below, chiefly hairy in the axillæ. Branches spreading, bright brown, winged with corky excrescences; when young, very hairy. Fruit nearly round, deeply cloven, naked. Grows in hedges, and flowers in March.

3. *U. major.* Smith. Leaves ovato-acuminate, very oblique at the base, sharply, doubly, and regularly serrate; always scabrous above, pubescent below, with dense tufts of white hairs in the axillæ. Branches spreading, bright brown, winged with corky excrescences; when young, nearly smooth. Fruit obovate, slightly cloven, naked. *U. hollandica.* Miller. Grows in hedges, and flowers in March.

4. *U. carpinifolia.* Lindl. Leaves ovato-acuminate, coriaceous, strongly veined, simply crenate, serrate, slightly oblique and cordate at the base, shining, but rather scabrous above, smooth beneath. Branches bright-brown, nearly smooth. Grows four miles from Stratford-on-Avon, on the road to Alcester.

5. *U. glabra.* Miller. Leaves ovato-lanceolate, acuminate, doubly and evenly crenate-serrate, cuneate and oblique at the base, becoming quite smooth above, smooth or glandular beneath, with a few hairs in the axillæ. Branches bright-brown, smooth, wiry, weeping. Fruit obovate, naked, deeply cloven. *β. glandulosa.* Leaves very glandular beneath. *γ. latifolia.* Leaves oblong, acute, very broad. Grows in woods and hedges; *β.* near Ludlow; *γ.* at West Hatch, in Essex. Flowers in March. N.B. To this species the Downton Elm and Scampston Elm of the nurseries probably belong.

6. *U. stricta.* Lindl. *Cornish Elm.* Leaves obovate, cuspidate, cuneate at the base, evenly and nearly doubly crenate-serrate, strongly veined, coriaceous, very smooth and shining above, smooth beneath, with hairy axillæ. Branches bright-brown, smooth, rigid, erect, very compact. *β. parvifolia.* Leaves much smaller, less oblique at the base, finely and regularly crenate,

acuminate rather than cuspidate. Grows in Cornwall and North Devon; β. the less common.

7. *U. montana.* Bauh. *Witch Elm.* Leaves obovate, cuspidate, doubly and coarsely serrate, cuneate and nearly equal at the base, always exceedingly scabrous above, evenly downy beneath. Branches not corky, cinereous, smooth. Fruit rhomboid, oblong, scarcely cloven, naked. *U. campestris.* Willd. *U. effusa.* Sibth., not of others. *U. nuda.* Chr. *U. glabra,* Hudson, according to Smith. N. B. Of this, the Giant Elm and the Chichester Elm of the nurseries are varieties.

THE HAWTHORN-TREE.

[*Cratægus.** Nat. Ord.—*Rosaceæ;* Linn.—*Icosand. Pentag.*]

The Hawthorn bush, with seats beneath the shade,
For talking age and whispering lovers made.

High as we admit Gilpin's taste for the picturesque to be, we are compelled to differ from him in his opinion of the Hawthorn. He observes that it has little claim to picturesque beauty; he complains that its shape is bad, that it does not taper and point like the holly, but is a matted, round, and

* *Cratægus.* Calyx superior, monosepalous, 5-cleft. Petals 5. Styles 2 to 5. Fruit a small *pome*, oval or round, concealing the upper end of the bony carpels. *Flowers* in cymes. *Leaves* lobed.

heavy bush. We are glad to find, however, that Sir T. Lauder thinks differently; he remarks, that "even in a picturesque point of view, it is not only an interesting object by itself, but produces an interesting combination, or contrast, as things may be, when grouped with other trees. We have seen it," he adds, "hanging over rocks, with deep shadows over its foliage, or shooting from their sides in the most fantastic forms, as if to gaze at its image in the deep pool below. We have seen it contrasting its tender green and its delicate leaves with the brighter and deeper masses of the holly and the alder. We have seen it growing under the shelter, though not under the shade, of some stately oak, embodying the idea of beauty protected by strength. Our eyes have often caught the motion of the busy mill-wheel, over which its blossoms were clustering. We have seen it growing grandly on the green of the village school, the great object of general attraction to the young urchins, who played in idle groups about its roots, and perhaps the only thing remaining to be recognised when the schoolboy returns as the man. We have seen its aged boughs overshadowing one half of some peaceful woodland cottage, its foliage half concealing the window, whence the sounds of happy content and cheerful mirth came forth. We know that lively season

> When the milkmaid singeth blithe,
> And the mower whets his scythe,
> And every shepherd tells his tale
> Under the hawthorn in the dale.

And with these, and a thousand such associations as these, we cannot but feel emotions of no ordinary nature when we behold this beautiful tree." And Gilpin admits, in another part of his *Forest Scenery*, that the Hawthorn, when entangled with an oak, or mixing with other trees, may be beautiful.

Loudon describes "the Hawthorn, *C. oxyacantha*, in its wild state, as a shrub, or small tree, with a smooth, blackish bark, and very hard wood. The branches are numerous and slender, furnished with sharp, awl-shaped spines. The leaves are of a deep smooth green, more or less deeply three-lobed, or five-lobed, cut and serrated, wedge-shaped, or rounded. The flowers have white petals, frequently pink, or almost scarlet, and sweet-scented." Its fragrance indeed is great, and its bloom is spread over it in profusion.

> Marke the faire blooming of the Hawthorne tree,
> Who, finely cloathed in a robe of white,
> Fills full the wanton eye with May's delight.
>
> CHAUCER.

While "in autumn," says Gilpin, "the Hawthorn makes its best appearance. Its glowing berries produce a rich tint, which often adds great beauty to the corner of a wood, or the side of some crowded clump."

There are many remarkable trees of this kind, but the only one we shall here particularly mention is Queen Mary's Thorn, which is thus described in that splendid work, the *Arboretum Britannicum*:— "The parent tree is in a garden near Edinburgh,

which once belonged to the Regent Murray, and is now, 1836, in the possession of Mr. Cowan, a paper manufacturer. It is very old, and its branches have somewhat of a drooping character; but whether sufficiently so to constitute a variety

Leaves, Flowers, and Berries of *C. oxyacantha.*

worth propagating as a distinct kind, appears to us very doubtful. It may be interesting, however, to some, to continue, by extension, the individual tree under which the unfortunate Queen is supposed to have spent many hours. The fruit of this variety is rather above the middle size, long, fleshy, of a deep red, and good to eat. The height of the parent tree is thirty-three feet, and the diameter of the head thirty-six feet; the trunk divides into two limbs, at fifteen inches from the ground, one of which is one foot four inches in diameter, and the other one foot. The tree is healthy and vigorous, though, if it be true that Queen Mary sat under its shade, it must be nearly three hundred years old."

The Hawthorn is found in most parts of Europe, and appears to have been of use in England from a very early period, as in all old works on husbandry ample directions are given for the planting and cultivation of the Thorn. In Tusser's *Five Hundred Points in Good Husbandry* we find the following directions:

> Go plough or delve up, advised with skill,
> The breadth of a ridge, and in length as you will;
> Where speedy quickset for a fence you will draw,
> To sow in the seed of the bramble and Haw.

If intended for seed, the haws should not be gathered until the end of October, when they become blackish; and even then they rarely vegetate before the second year. The proper mode of preparing them is as follows:—If you do not sow them immediately, as soon as they are gathered, spread

them on an airy floor for five or six weeks, till the seeds are dry and firm; then plunge them into water, and divest them wholly of their pulp by rubbing them between your hands with a little sand; spread them again on the loft three or four days, till quite dry; mix them with fine loose sandy mould, in quantity not less than the bulk of the seeds, and lay them in a heap against a south wall, covering them over, three or four inches deep, with soil of the same quality as that with which they are mixed. If you do not sow them in the spring, in this situation let them remain till the second spring, as the seeds, if sown, will not appear the first year. That the berries may be as equally mixed with the soil as possible, turn over the heaps once in two months, blending the covering with the seeds, and, at every turning, give them a fresh covering in the winter months. They should be sown the first dry weather in February, or the beginning of March. Separate them from the loose soil in which they were mixed, with a wire sieve. The ground should be good, dry, fresh land, well prepared, and the seeds beat down with the back of a spade, and then covered about half an inch thick with mould; or they may be dropped in drills about eight inches apart.

The utility of the Hawthorn is chiefly for fences. The wood is hard, and the root of an old Thorn is an excellent material for boxes and combs, and is curiously and naturally wrought. It is white, but of a somewhat yellow hue, and is capable of a very high polish.

THE HAZEL-TREE.

[*Corylus.** Nat. Ord.—*Amentiferæ;* Linn.—*Monoec. Polyan.*]

THE common Hazel, *C. avellana*, is a native of all the temperate climates of Europe and Asia, and grows wild in almost every part of Britain, from Cornwall to Caithness. Although never arriving at the bulk of a timber tree, it yet claims our notice, among the natives of the forest, on various accounts. Its flowers are among the first to make their appearance, which is generally so early as

* *Corylus.* Barren catkin long, pendulous, cylindrical. Scales 3-lobed, middle lobe covering the 2 lateral lobes. Stamens 8. Anther 1-celled. Perianth none. Fertile flowers, several surrounded by a scaly involucre. Styles 2. Nut 1-seeded, inclosed in the enlarged coriaceous laciniated involucre.

the end of January, and in a month's time they are in full bloom; these are small, and of a beautiful red colour. Its fruit-bearing buds make a splendid show in March, when they burst and disclose the bright crimson of their shafts.

The common Hazel is known at once by its bushy habit; by its roundish-cordate taper-pointed, deeply serrated, light-green, downy leaves; by its rough light-coloured bark; and by its broad leafy husks, much lacerated and spreading at the point. The nuts are a very agreeable fruit, abounding in a mild oil, which is expressed and used by artists for mixing with their colours. We must, however, caution persons against eating too freely of this fruit, as it is difficult of digestion, and often proves hurtful when eaten in large quantities. They are ripe about harvest, and we ourselves have frequently enjoyed the pleasures of a *nutting* party, and can fully enter into the spirit of the sketch in *Autumn*, by our admired bard, Thomson:

> Ye swains, now hasten to the Hazel bank,
> Where, down yon dale, the wildly-winding brook
> Falls hoarse from steep to steep. In close array,
> Fit for the thickets and the tangling shrub,
> Ye virgins come. For you their latest song
> The woodlands raise; the clustering nuts for you
> The lover finds amid the secret shade;
> And, where they burnish on the topmost bough,
> With active vigour crushes down the tree,
> Or shakes them ripe from the resigning husk.

We must also give here a description of the pleasures of nutting, from our favourite poet—the poet of nature—Wordsworth:

—It seems a day
(I speak of one from many singled out)
One of those heavenly days which cannot die;
When in the eagerness of boyish hope,
I left our cottage-threshold, sallying forth
With a huge wallet o'er my shoulders slung,

Leaves, Catkins, and Nuts of *C. avellana.*

A nutting-crook in hand, and turned my steps
Toward the distant woods. * * *
* * * * Among the woods
And o'er the pathless rocks I forced my way,
Until at length I came to one dear nook
Unvisited, where not a broken bough
Drooped with its withered leaves, ungracious sign
Of devastation! but the Hazels rose
Tall and erect, with milk-white clusters hung,
A virgin scene! A little while I stood,
Breathing with such suppression of the heart
As joy delights in; and with wise restraint,
Voluptuous, fearless of a rival, eyed
The banquet,—or beneath the trees I sate
Among the flowers, and with the flowers I played.
* * * * * * * *
* * * * Then up I rose,
And dragged on earth each branch and bough with crash
And merciless ravage, and the shady nook
Of Hazels, and the green and massy bower
Deformed and sullied, patiently gave up
Their quiet being; and unless I now
Confound my present feelings with the past,
Even then, when from the bower I turned away
Exulting, rich beyond the wealth of kings,
I felt a sense of pain when I beheld
The silent trees, and the intruding sky.

The nut is a favourite food of the squirrels, which hoard them up for winter store, being careful always to select the best. It is commonly remarked, that a plentiful year for nuts is the same for wheat.

In order to raise the Hazel, the nuts must be gathered in autumn. These must be carefully preserved until February in a moist place; then, having the ground well ploughed and harrowed, sow them in drills drawn at one yard distance. When the young plants appear they must be kept

clear from weeds, and remain under this careful cultivation till the weeds are no longer to be feared. As they grow they should not be permitted to stand too thick, but be kept thinned, until the plants are left a yard asunder each way. Virgil says,

Hazels, from set and suckers, take.

From these they thrive very well, the shoots being of the scantling of small wands and switches, or somewhat larger, and such as have divers hairy twigs, which are not to be disbranched, any more than their roots, unless by a very discreet hand. Thus, a copse of Hazels being planted about autumn, may be cut the next spring within three or four inches of the ground, when new shoots will soon grow up in clusters, and in tufts of fair poles of twenty, or sometimes thirty feet long. Evelyn, however, recommends that these offsets should be allowed to grow two or three years, until they have taken strong hold, when they may be cut close to the very earth, the feeble ones especially. The rate of growth, under favourable circumstances, is from one to two feet for the first two or three years after planting; after which, if trained to a single stem, the tree grows slower, attaining the height of about twelve feet in ten years, and never growing much higher, unless drawn up by other trees. It is seldom, however, allowed to grow to maturity, being usually cut down before that period.

THE HOLLY-TREE.

[*Ilex.** Nat. Ord.—*Aquifoliaceæ;* Linn.—*Tetram. Tetrag.*]

Above all the evergreens which enrich our landscapes, there is none to be compared to the common Holly, *I. aquifolium.* This was a favourite plant with Evelyn. It grew spontaneously and luxuriantly near his own residence in Surrey, in a vale anciently called Holmes' Dale, and famous for the flight of the Danes; he expresses his wonder that Britons seek so eagerly after foreign

* *Ilex.* Calyx inferior, 4 or 5-toothed, persistent. Corolla rotate, 4 or 5-cleft. Stigmas 4, sessile, or nearly so; distinct or united. Fruit a sperical berry, 4-celled, each cell 1-seeded. Flowers sometimes polygamous.

plants, and at a vast expense, while they neglect the culture of this incomparable tree, whether it be cultivated for utility or ornament. He speaks in raptures of it: "Is there under heaven a more glorious and refreshing object of the kind, than an impenetrable hedge, of about four hundred feet in length, nine feet high, and five in diameter, which I can show in my gardens at Say's Court, Deptford, at any time of the year, glittering with its armed and varnished leaves; the taller standards at orderly distances, blushing with their natural coral."

The leaves of the common Holly are ovate, acute, spinous, wavy, thorny, and shining; the lower leaves being very spinous, while the upper ones, especially on old trees, are entire. The flowers are white, appearing in May, and the berries, which are red, ripen in September, and remain on the tree all the winter.

Gilpin remarks that the Holly can hardly be called a tree, though it is a large shrub, and a plant of singular beauty; but he cannot accord with the learned naturalist (Evelyn) in the whole of his rapturous encomium on his hedge at Say's Court. He recommends it, not as a hedge, but to be planted in a forest, where, mixed with oak, or ash, or other trees of the wood, it contributes to form the most beautiful scenes; blending itself with the trunks and skeletons of the winter, or with the varied greens of summer. And as far as an individual bush can be beautiful, the Holly is extremely so. It has, besides, to recommend it, that it is among the hardiest and stoutest plants

of English growth. It thrives in all soils, and in all situations. At Dungeness, in Kent, it flourishes even among the pebbles of the beach. It abounds, more or less, in the remains of all aboriginal forests,

Leaves, Flowers, and Berries of *I. aquifolium.*

and perhaps, at present, it prevails nowhere to a greater extent than in the remains of Needwood Forest, in Staffordshire; there are likewise many fine trees in the New Forest, in Hampshire. It is also abundant on the banks of the river Findhorn, in Aberdeenshire; but it is not very common in Ireland, except about the lakes of Killarney, where it attains a large size.

Why Gilpin should hesitate about considering the Holly a tree, we are at a loss to conceive, as it grows to the height of thirty feet, and, under cultivation, to sixty feet or upwards, and yields timber of considerable value. Being the whitest of all hard woods, it is useful for inlaying, especially under thin plates of ivory, rendering the latter more conspicuous; and also for veneering. It is much used by the turner and mathematical instrument maker, and for handles for the best riding-rods, &c.

The Holly is a very valuable plant for fences; it is seldom attacked by insects, and, if shorn, becomes so impenetrable that birds cannot obtain access thereto to build their nests. On these accounts it is particularly valuable to the farmer for hedges; the chief objection to it for this purpose is, the slowness of its growth while young, and the difficulty of transplanting the plants when grown to a moderate size. Mr. Sang says, that Holly hedges are the best for making durable fences, and afford the greatest degree of shelter, especially during the winter months; no plant endures the shears better than the Holly; a hedge of it may

be carried to a great height, and consequently it is well fitted for situations where strength and shelter are required; it luxuriates most in a rich sandy loam, although there are few soils in which it will not grow. After planting, the Holly makes but indifferent progress for a few years; but after it becomes established in the ground, or about the third or fourth year after planting, no fence whatever will outgrow the Holly. "I have seen hedges," says Evelyn, "or stout walls, of Holly, twenty feet high, kept upright, and the gilded sort budded low; and in two or three places one above another, shorn and fashioned into columns and pilasters, architecturally shaped, and at due distance; than which nothing can possibly be more pleasant, the berry adorning the intercolumniations with scarlet festoons and encarpa." The employment of the Holly at Christmas for ornamenting churches and dwelling-houses, is believed to have come down to us from the Druids, who made use of it in their religious ceremonies. The name Holly is supposed to be a corruption of the word *holy*, as Dr. Turner, one of the earliest English writers on plants, calls it **holy**, and **holy tree**, which appellation was probably given to it on account of its use in holy places; the German name, Christdorn, the Danish name, Christorn, and the Swedish name, Christtorn, seem to justify this conjecture. It is also styled Holy in a carol written in its praise in the time of Henry VI., preserved in the Harleian MSS., No. 5396, and printed in Loudon's *Arboretum:*

Nay, Ivy, nay, it shall not be I wys;
Let Holy hafe the maystry, as the maner ys,
Holy stond *in the halle*, fayre to behold;
Ivy stond *without the dore;* she is full sore a cold.

Holy and hys mery men they dansyn and they syng,
Ivy and hur maydenys they wepyn and they wryng.
Ivy hath a lybe; she laghtit with the cold,
So mot they all hafe that wyth Ivy hold.

Holy hath berys as red as any rose,
They foster the hunter, kepe him from the doo.
Ivy hath berys as black as any slo;
Ther com the oule and ete hym as she goo.

Holy hath byrdys, aful fayre flok,
The nyghtyngale, the poppyngy, the gayntyl laverok,
Good Ivy! what byrdys ast thou!
Non but the Howlet that "How! How!"

The disciples of Zoroaster believe that the sun never shadows the Holly tree; and there are still some followers of this king in Persia, who throw water which has been in the bark of the Holly in the face of new-born children. Southey, in a very elegant poem, which is printed in the *Sentiment of Flowers*, in the article entitled Foresight, of which quality the Holly is considered emblematical, has noticed the circumstance of the lower leaves of large plants being spinous, while the upper are entire.

THE HORNBEAM.

[*Carpinus.** Nat. Ord.—*Amentiferæ;* Linn.—*Monœc. Polyan.*]

The Common Hornbeam, *C. betulus*, is a native of England and Ireland, and of the south of Scotland, and is also indigenous throughout the greater part of Europe and western Asia, but not in Africa. Picturesquely considered, the Hornbeam is very nearly allied to the beech. When suffered to grow it will be like it, and attain to a great height, with

* *Carpinus.* Barren catkin long, cylindrical. Scales roundish. Stamens 5 to 14. Anther 1-celled. Fertile flower in a lax catkin. Scales large, leaf-like, 3-lobed, 2-flowered. Styles 2. Nut ovate, 1-seeded.

a fine straight trunk; it is very common in many parts of England, but is rarely allowed to become a timber tree, being generally pollarded by the country people. It is, therefore, usually seen only in clipped hedges, where it is very obedient to the knife, and, with a little care, will never presume to appear out of form. It is excellent for forming tall hedges, or screens, in nursery grounds or ornamental gardens. That admirable *espaliere* hedge in the long middle walk of Luxemburg garden at Paris (than which there is nothing more graceful), is planted of this tree; and so is that cradle, or close walk, with that perplexed canopy which covers the seat in her Majesty's garden at Hampton Court; these hedges are tonsile, but where they are maintained to fifteen or twenty feet in height (which is very frequent in the places before mentioned), they are to be cut and kept in order with a scythe of four feet long, and very little falcated; this is fixed on a long sneed, or straight handle, and does wonderfully expedite the trimming of these and the like hedges.

The leaves of the Hornbeam somewhat resemble those of the elm, but are smoother; they are cordate, doubly serrate, pointed, plaited when young, and have numerous parallel, transverse, hairy ribs; their colour is a darkish green, changing to a russet brown in autumn, and they remain on the tree, like those of the beech, till spring. The buds are rather long and pointed. The flowers appear at the same time as the leaves. The male catkins are loose, scaly, of a yellowish colour, and about

two or three inches long; the female catkins are much smaller, and, when young, are covered with close brownish scales, which gradually increase, and form unequally three-lobed, sharply serrated, veiny, dry, pale-green bracts, each enveloping an

Leaves and Flowers of *C. betulus.*

angular nut, scarcely bigger than a grain of barley. These nuts ripen in October, and fall with the capsules. The bark of the Hornbeam is light-gray and smooth, and the wood very white, tough, and strong. It is used for yokes, handles for tools, and cogs for mill-wheels; it is also much valued by the turner. It is very inflammable, and will burn like a candle, for which purpose it was formerly employed. The inner bark is much used in the north of Europe for dyeing yellow.

When raised from seed, the common Hornbeam acquires the usual magnitude of the beech, to which, as before stated, it is similar in its appearance. In the neighbourhood of London the rate of growth may be considered from twelve to eighteen inches a-year for the first ten years, and the tree will attain its full size in between fifty and sixty years; its longevity may be considered as equal to that of the beech. Hanbury says that this tree is peculiarly grateful to hares and rabbits; and if so, the planting of it among other trees and shrubs might be the means of saving them from being injured by these creatures. The Hornbeam preserves itself from the butting of the deer, by its mode of throwing out its branches; on this account it should be cultivated in parks, as well as for its beauty and shelter. The regular growth of the Hornbeam is referred to by Fawkes, in his *Bramham Park:*

> Here spiry firs extend their lengthened ranks,
> There violets blossom on the sunny banks;
> Here Hornbeam hedges regularly grow,
> There hawthorn whitens and wild roses blow.

The Hornbeam is recommended to be planted on cold, barren hills, as in such situations it will flourish where few other trees will grow; it also resists the winds much better than the generality of trees, and, at the same time, it is not slow of growth. In such situations, Dr. Hunter observes that he noticed some specimens nearly seventy feet high, having large, noble stems, perfectly straight and sound.

There was a fine specimen of this tree at Bargoly, in Galloway, which measured, in 1780, six feet two inches in circumference. It had twenty feet of clear trunk, and was seventy feet high.

THE HORSE-CHESTNUT TREE.

[*Æsculus.* Nat. Ord.—*Æsculaceæ;* Linn.—*Heptan. Monog.*]

The Common Horse-chestnut, *Æ. hippocastanum*, is supposed to be a native of the north of India, and appears to have been introduced into England about the year 1575. It is a tree of the largest size, with an erect trunk and a pyramidal head. It forms its foliage generally in a round mass, with little appearance of those breaks which are so much to be admired, and which contribute to give an airiness and lightness, at least a richness and variety, to the whole mass of foliage. This tree is,

however, chiefly admired for its flower, which in itself is beautiful; but the whole tree together in flower is a glaring object, totally unharmonious and unpicturesque. In some situations, indeed, and amidst a profusion of other wood, a single Horse-chestnut or two in bloom may be beautiful. As it forms an admirable shade, it may be of use, too, in thickening distant scenery, or in screening an object at hand; for there is no species of foliage, however heavy, nor any species of bloom, however glaring, which may not be brought, by some proper contrast, to produce a good effect. It is generally, however, considered one of the most ornamental trees in our plantations. Evelyn styles it a tree of singular beauty and use; and Miss Twamley, in her elegant volume, the *Romance of Nature*, breaks into raptures in speaking of it. "Few trees," she says, "are so magnificent in foliage as the Horse-chestnut, with its large fan-like leaves, far more resembling those of some tropical plant than the garb of a forest tree in climes like ours; but when these are crowned with its pyramids of flowers, so splendid in their distant effect, and so exquisitely modelled and pencilled when we gather and examine their fair forms—is it not then the pride of the landscape? If the Oak—the true British Oak—be the forest king, let us give him at least a partner in his majesty; and let the Chestnut, whose noble head is crowned by the hand of spring with a regal diadem, gemmed with myriads of pearly, and golden, and ruby flowers, let her be queen of the woods in bonny

England; and while we listen to the musical hum of bees, as they load themselves with her wealth of honey, we will fancy they are congratulating their noble and generous friend on her new honours."

The leaves of the Horse-chestnut are large, of a deep green colour, fine, and palmated, and appear very early in the spring; it is naturally uniform in its growth. In the spring it produces long spikes, with beautiful flowers white and variegated, generally in such number as to cover the whole tree, and to give it the appearance of one gigantic bouquet. No flowering shrub is rendered more gay by its blossoms than this tall tree; thus it combines beauty with grandeur, in a degree superior to any other vegetable of these climates. In Howitt's *Forest Minstrel*, we find the following poetical allusion:

> For in its honour prodigal nature weaves
> A princely vestment, and profusely showers,
> O'er its green masses of broad palmy leaves,
> Ten thousand waxen pyramidal flowers;
> And gay and gracefully its head it heaves
> Into the air, and monarch-like it towers.

The buds of this tree, before they shoot out leaves, become turgid and large, so that they have a good effect to the eye long before the leaves appear; and it is peculiar to the Horse-chestnut, that as soon as the leading shoot is come out of the bud, it continues to grow so fast as to be able to form its whole summer's shoot in about three weeks' or a month's time: after this it grows little or nothing more in length, but thickens, and becomes strong and woody, and forms the buds for

the next year's shoot; the leaves are blunt, spear-shaped, and serrated, growing by sevens on one

stalk, the middle one longest. The flowers are in full blossom about May, and, on fine trees, make

a pleasing appearance ; they continue in bloom for a month or more.

> In June that Chestnut shot its blossomed spires
> Of silver upward 'mid the foliage dark;
> As if some sylvan deity had hung
> Its dim umbrageousness with votive wreaths.

Thus, Mr. Moir's Horse-chestnut put forth its bloom in June. The fruit ripens about the end of September or the beginning of October.

We quote the following singular fact from the *Magazine of Natural History*:—"The downy interior of the Horse-chestnut buds are protected from the wet by a covering of a gummy substance. Miss Kent says, 'that we cannot have a better specimen of the early formation of plants in their bud than in that of the Horse-chestnut.' A celebrated German naturalist detached from this tree, in the winter season, a flower bud not larger than a pea, and first took off the external covering, which he found consisted of seventeen scales ; having removed these scales, and the down which formed the internal covering of the bud, he discovered four branch leaves surrounding a spike of flowers, the latter of which was so distinctly visible, that, with the aid of a microscope, he not only counted sixty-eight flowers, but could discern the pollen of the stamens, and perceive that some were opaque and some transparent. This experiment may be tried by any one, as the flowers may be perceived with a common magnifying glass ; but as detaching the scales requires care, it would be advisable for an

unpractised student to gather the bud in early spring, when the sun is just beginning to melt away the gum with which the scales are sealed together."

The Horse-chestnut is extremely well adapted to parks, not only because it grows to a large size and forms a beautiful regular head, thereby becoming a pleasing object at a distance, but also on account of the quantity of nuts it yields, which are excellent food for deer, so that where great numbers of deer are kept, the planting of these trees in abundance is to be recommended. It is also very suitable for avenues, or walks, though it has been objected that its leaves fall early in the autumn. This must be admitted; yet we think it fully compensates for the loss by the exhibition of its light-brown nuts, some on the ground, some ready to fall, and others just peeping out of their cells. The finest avenue of these trees in England is that at Bushy Park.

There are many fine specimens of this tree in various parts of the country. In Suffolk, at Finborough Hall, one, eighty years planted, is one hundred feet high; the diameter of its trunk, at one foot from the ground, is five feet. In the church-yard at Bolton-on-Dearne, in Yorkshire, there are some fine specimens; one sixty-six feet high, and two feet eight inches in diameter at the ground; and another sixty-eight feet high, and two feet six inches in diameter. But the largest in Britain is said to be at Trocton, in Lincolnshire, fifty-nine feet high. Loudon says this is a most

magnificent tree, with immense branches extending over the space of three hundred and five feet in circumference; and the branches are so large as to require props, so that at a little distance it looks like an Indian banyan tree.

The Horse-chestnut is propagated from the nut, of which a sufficient quantity should be gathered as they fall from the trees, and soon afterwards either sown or mixed up with earth, until the spring; because, if exposed to the atmosphere, they will lose their germinating power in a month. After being transplanted into the nursery, and having there attained a sufficient size, the young trees must be taken out with care, the great side shoots and bruised parts of the roots lopped off, and then planted in large holes, level with the surface of the ground at the top of their roots, the fibres being all spread and lapped in the fine mould, and the turf also worked to the bottom: October is the best season for this work. Like most other trees, this delights in good fat land, but it will grow exceedingly well on clayey and marly grounds; large trees have been known to look luxuriant and healthy in very cold barren earth. It will attain a very large size in a few years.

The timber of this tree is not very valuable, especially where great strength is required, nor will it bear exposure to the air. It is, however, of some use to the turner, and also serviceable for flooring, linings to carts, &c. Du Hamel recommends it as suitable for water-pipes, which are kept constantly underground. The fruit is of a farina-

ceous quality, but so bitter as to be useless for food. Goats, sheep, and deer are said to be very fond of them; the bark has considerable astringency, and may be used for tanning leather. A decoction of the rind will dye the hair of a golden hue.

THE LARCH-TREE.

[*Abies Larix.** Nat. Ord.—*Coniferæ;* Linn.—*Monœc. Monand.*]

The Larch claims the Alps and Apennines for its native country, where it thrives in higher regions of the air than any known tree of its large bulk, hanging over rocks and precipices which have never been trod by human feet. It is often felled by the Alpine peasant, to fall athwart some yawning chasm, where it affords an awful passage from cliff to cliff, while the roaring cataract below, is only seen in surges of vapour.

* Abies Larix. *Lind.* Pinnis L. *Linn.* L. Europæa. Lond.

The Larch is first mentioned as growing in England in 1629, but it did not become plentiful in nurseries until 1759. It is stated, in the *Transactions of the Highland Society* (vol. xi. p. 169), that it was first planted as a forest tree at Goodwood, the seat of the Duke of Richmond, near Chichester; but it was not until after 1784, on the Society of Arts offering gold medals and premiums for its cultivation, that it became generally planted. The following are some of the largest numbers of trees planted about that time by the respective parties:—The Bishop of Llandaff, 48,500, on the high grounds near Ambleside, in Westmoreland; W. Mellish, Esq. of Blythe, 47,500; George Wright, Esq. of Gildingwells, 11,573; and the late Earl of Fife, 181,813, in the county of Moray, in Scotland. The same spirit for planting this tree has continued to the present time, wherever the land has not been thought more valuable for other purposes. In 1820 the Society for promoting Arts, &c., presented his Grace the Duke of Devonshire with the gold medal, for planting 1,981,065 forest trees, 980,128 of which were Larch.

Of the introduction of the Larch into Scotland, it is stated by Headrick, in his *Survey of Forfarshire:* "It is generally supposed that Larches were brought into Scotland by one of the Dukes of Athol; but I saw three Larches of extraordinary size and age, in the garden near the mansion-house of Lockhart of Lee, on the northern banks of the Clyde, a few miles below Lanark. The stems and branches were so much covered with lichens, that

they hardly exhibited any signs of life or vegetation. The account I heard of them was, that they were brought there by the celebrated Lockhart of Lee (who had been ambassador from Cromwell to France), soon after the restoration of Charles II. (about 1660). After Cromwell's death, thinking himself unsafe on account of having served the usurper, he retired for some time into the territories of Venice; he there observed the great use the Venetians made of Larches in shipbuilding, in piles for buildings, in the construction of their houses, and for other purposes; and when he returned home, he brought a great number of large plants, in pots, in order to try if they could be gradually made to endure the climate of Scotland. He nursed his plants in hot-houses, and in a greenhouse, sheltered from the cold, until they all died except the three alluded to. These, in desperation, he planted in the warmest and best sheltered part of his garden, where they attained an extraordinary height and growth."

The Common Larch, *A. Larix*, may be described as "a tree, rising in favourable situations on the Alps, and also in Britain, from eighty to one hundred feet in height, with a trunk from three to four feet in diameter, and having a conical head. *Branches* subverticillate, and spreading horizontally from the straight trunk; occasionally, however, rather pendulous, particularly when old. *Branchlets* more or less pendulous. *Leaves* linear, soft, blunt, or rounded at the points, of an agreeable light green colour; single or fasciculated; in the

latter case many together round a central bud; spreading, and slightly recurved. *Male catkins* without foot-stalks, globular, or slightly oblong, of a light yellow colour; and, together with the *female catkins*, or young cones, appearing in April

Foliage, Catkins; immature and perfect Cones; and Scale opened showing the Seeds of L. Europæa.

and the beginning of May ; the latter varying from a whitish to a bright red colour. *Cones* of an oblong, ovate shape, erect, full one inch in length, and of a brownish colour when ripe. *Scales* persistent, roundish, striated, and generally slightly waved, but not distinctly notched on the margin. *Bracts* generally longer than the scales, particularly towards the base of the cones. *Seeds* of an irregular or ovate form, fully one-eighth of an inch long, and more than half-surrounded by the smooth, shining, persistent pericarp. Cotyledons five to seven."—*Lawson's Manual.*

In the *Memoirs of the Royal Society of Agriculture at Paris*, for the year 1787, there is an Essay by M. le President de la Tour d'Aigues, on the culture of the Larch, in which it is celebrated as one of the most useful of all timber trees. He tells us that in his own garden he has rails which were put up in the year 1743, partly of oak and partly of Larch. The former, he says, have yielded to time, but the latter are still sound. And in his Castle of Tour d'Aigues he has Larchen beams of twenty inches square, which are sound, though above two hundred years old. The finest trees he knows of this kind, grew in some parts of Dauphiny, and in the forest of Baye, in Provence, where there are Larches, he tells us, which two men cannot encompass.

The timber is valuable for many purposes. It is said, that old dry Larch will take such a polish as to become almost transparent, and that, in this state, it may be wrought into very beautiful wains-

cot. In our encomium of the Larch, we must not omit that the old painters used it, more than any other wood, to paint on, before the use of canvas became general. Many of Raphael's pictures are painted on boards of Larch. It is also used by the Italians for picture-frames, because no other wood gives gilding such force and brilliancy. We are told that this is the reason why their gilding on wood is so much superior to ours.

In Switzerland they cover the roofs of their houses with shingles made of Larch. These are usually cut about one foot square and half an inch in thickness, which they nail to the rafters. At first the roof appears white, but in the course of two or three years it becomes as black as coal, and all the joints are stopped by the resin which the sun extracts from the pores of the wood. This shining varnish renders the roof impenetrable to wind or rain: this is the chief covering, and, some say, an incombustible one. From the Larch, too, is extracted what is commonly called Venice turpentine. This substance, or natural balsam, flows at first without incision; when it has done dropping the poor people make incisions, at about two or three feet from the ground, into the trunk of the trees, and into these they fix narrow troughs, about twenty inches long; the end of these troughs is hollow, like a ladle, and in the middle is a small hole bored for the turpentine to run into a receiver which is placed below it. The people who gather it, visit the tree, morning and evening, from the end of May to September, to collect the turpen-

tine out of the receivers. When it flows out of the tree the turpentine is clear like water, and of a yellowish white; but as it becomes older it thickens, and changes to a citron colour. It is procured in great abundance in the neighbourhood of Lyons, and in the valley of St. Martin, near Lucerne, Switzerland. It is only after the tree has attained the thickness of ten or twelve inches in diameter, that it is thought worth while to collect the turpentine; and if the tree remain in vigorous growth, it will continue, for forty or fifty years, to yield annually seven or eight pounds of turpentine.

The cones of the Larch, intended for seed, ought to be gathered towards the latter end of November, and then kept in a dry place till the following spring, when, being spread on a cloth and exposed to the sun, or laid before the fire, the scales will open and shed their seed. These should be sown on a border exposed to the east, where they will be affected by the morning sun only, as the plants do not prosper so well where the sun lies much on them. In autumn the young plants may be pricked out into other beds, as soon as they have shed their leaves, at the distance of six inches each way. In two years the young trees will be ready to plant where they are intended to stand; then they need not be more than eight or ten feet apart from each other, but at less distance on exposed situations. It is now well known, that the Larch will grow in wild and barren situations better than in a luxuriant soil; and this tree is even apt to grow top-

heavy in too much shelter and nourishment. No tree has been introduced into Britain with such remarkable success as the Larch. Phillips says, "The face of our country has, within the last thirty years, been completely changed by the numerous plantations of Larch that have sprung up on every barren spot of these kingdoms, from the southern shores to the extremity of the north, and from the Land's End to the mouth of the Thames. So great has been the demand for young trees of this species of pine, that one nurseryman in Edinburgh raised above five million of these trees in the year 1796. We have introduced no exotic tree that has so greatly embellished the country in general. Its pale and delicate green, so cheerfully enlivening the dark hue of the fir and the pine, and its elegant spiral shape, contrasting with the broad spreading oak, is a no less happy contrast; whilst its stars of fasciculate foliage are displayed to additional advantage, when neighbouring with the broad-leaved æsculus, the glossy holly, the drooping birch, or the tremulous aspen."

Sir T. D. Lauder considers that "The Larch is unquestionably by much the most enduring timber we have. It is remarkable, that whilst red wood or heart wood is not formed at all in the other resinous trees till they have lived for many years, the larch, on the other hand, begins to make it soon after it is planted; and whilst you may fell a Scotch fir of thirty years old, and find no red wood in it, you can hardly cut down a young Larch large enough to be a walking-stick, without find-

ing just such a proportion of red wood, compared to its diameter as a tree, as you will find in the largest Larch in the forest, when compared to its diameter. To prove the value of the Larch as a timber tree, we believe, at the suggestion of the then Duke of Athol, posts of equal thickness and strength, some of Larch and others of oak, were driven down facing the river-wall, where they were alternately covered with water by the effect of the tide, and left dry by its fall. This species of alternation is the most trying of all circumstances for the endurance of timber, and accordingly the oaken posts decayed, and were twice renewed in the course of a very few years, whilst those which were made of Larch remained altogether unchanged." Of the Larch, Mr. Sang remarks that it "bears the ascendency over the Scotch pine in the following important circumstances: that it brings double the price, at least per measurable foot; that it will arrive at a useful timber size in one half, or a third part, of the time in general which the fir requires; and, above all, that the timber of the Larch, at thirty or forty years old, when planted in a soil and climate adapted to the production of perfect timber, is, in every respect, superior in quality to that of the fir at a hundred years old." On experimental observation, the Larch has been found, in Scotland, to increase annually, at six feet from the ground, about one inch and a half in circumference, on the trunks of trees from ten to fifty years of age. In the course of fifty years the tree will attain the height of

eighty feet or upwards; and, in its native habitats, according to Willdenow, "it lives from one hundred and fifty to two hundred years."

"Though we should least expect to find such a quality in a resinous tree like the Larch, it has been proved to make a beautiful hedge, and to submit with wonderful patience to the shears. We once saw a very pretty fence of this description in a gentleman's pleasure grounds near Loch Lomond. The trees were planted at equal distances from each other, and being clipped, were half cut through towards the top, and bent down over each other, and, in many instances, the top shoot of one had insinuated itself into that adjacent to it, so as to have become corporeally united to it; and, strange as it may seem, we actually found one top that had so inserted itself, which, having been rather deeply cut originally by the hedge-bill, had actually detached itself from its parent stock, and was now growing, grafted on the other, with the lower part of it pointing upwards into the air!"—*Sir T. D. Lauder.*

There are ten or more varieties of the Larch in cultivation, but as these are probably only different forms of the same species, it is unnecessary to enumerate them.

THE LIME, OR LINDEN TREE.

[*Tilia.** *Europœa.* Nat. Ord.—*Tiliaceæ;* Linn.—*Polyand. Monog.*]

The Common Lime-tree grows naturally straight and taper, with a smooth erect trunk, and a fine spreading head, inclining to a conical form. In a good soil it arrives at a great height and size,

* *Generic characters.* Sepals 5, deciduous. Petals 5, with or without a scale at the base. Stamens indefinite, free, or polyadelphous. Ovary 5-celled, cells 2-seeded. Style 1. Fruit 1-celled, with 1 or 2 seeds.

and becomes a majestic object. Thus we rea that

> The stately Lime, smooth, gentle, straight, and fair,
> With which no other dryad may compare,
> With verdant locks and fragrant blossoms decked,
> Does a large, even, odorate shade project.

This beautiful tree is a native of the middle and north of Europe, and is said to have been highly esteemed among the Romans for its shade. Evelyn praises the Lime as being the most proper and beautiful for walks; as producing an upright body, smooth and even bark, ample leaves, sweet blossom, and a goodly shade, at the distance of eighteen or twenty feet. Those growing in St. James's Park, London, are said to have been planted at his suggestion. There are now many avenues of Limes in various parts of the country. At the termination of one at Colerton, Leicestershire, there is placed an urn with the following tribute to the memory of Sir Joshua Reynolds, written by Wordsworth at the request of the proprietor, Sir George Beaumont, Bart. :—

> Ye Lime-trees, ranged before this hallowed urn,
> Shoot forth with lively power at spring's return;
> And be not slow a stately growth to rear
> Of pillars, branching off from year to year,
> Till they have learned to frame a darksome aisle,—
> That may recal to mind that awful pile
> Where Reynolds, 'mid our country's noblest dead,
> In the last sanctity of fame is laid.
> There, though by right the excelling painter sleep,
> Where death and glory a joint Sabbath keep;
> Yet not the less his spirit would hold dear
> Self-hidden praise, and friendship's private tear;

Hence, on my patrimonial grounds, have I
Raised this frail tribute to his memory;
From youth a zealous follower of the art
That he professed, attached to him in heart;
Admiring, loving, and with grief and pride,
Feeling what England lost when Reynolds died.

Loudon speaks of two ancient Lime-trees at Zoffingen, on the branches of which is placed a plank, in such a manner as to enable any one to walk from the one to the other; and thus people may not only walk, but even dance, upon the foliage of the tree. In the village of Villars en Morig, near Fribourg, there is a large Lime which existed there long before the battle of Morat (1476), and which is now of extraordinary dimensions; it was, in 1831, seventy feet high, and thirty-six feet in circumference at four feet from the ground, where it divided into large and perfectly sound branches. It must be nearly a thousand years old. And at Fribourg, in the public square, there is a large Lime, the branches of which are supported by pieces of wood. This tree was planted on the day when the victory was proclaimed of the Swiss over the Duke of Burgundy, Charles the Bold, in the year 1476; and it is a monument admirably accordant with the then feebleness of the Swiss republics, and the extreme simplicity of their manners. In 1831 the trunk of this tree measured thirteen feet nine inches in circumference.

Botanically considered, the Common Lime is a large and handsome tree with spreading branches, thickly clothed with leaves twice the length of their

petioles, cordate at the base, serrate, pointed, smooth—except a woolly tuft at the origin of each nerve beneath—unequal and entire at the base; stipules oval, smooth, in pairs at the base of each

Leaves and Flowers of T. Europæa.

foot-stalk; flower-stalks axillar, cymose, each bearing an oblong, pale, smooth bract, united, for half its length, with the stalk; flowers of a greenish colour, growing in clusters of four or five together, and highly fragrant, especially at night. This renders them very attractive to the bees, which is referred to by Virgil, in his beautiful description of the industrious Corycian, thus translated by Martyn:—"He therefore was the first to abound with pregnant bees, and plentiful swarms, and to squeeze the frothing honey from the combs. He had Limes, and plenty of pines; and as many fruits as showed themselves in early blossom, so many did he gather ripe in early autumn."—*Geo.* iv. 127.

The seeds of the Linden-tree rarely ripen in Britain; this tree is, therefore, properly propagated by layers, which must be made in the nursery in autumn; in one year they become rooted so as to allow of being removed. It will grow well in any soil or situation, but if planted in a rich loamy earth, the rapidity of its growth will be almost incredible. The timber of the Lime-tree is very serviceable, and much preferable to that of the willow, being stronger yet lighter. Because of its colour, which is of a pale yellow or white, and its easy working, and not being liable to split, architects form with it their models for buildings. The most elegant use to which it is applied is for carving, not only for small figures, but large statues in basso and alto relievo, as that of the Stoning of St. Stephen, with the structures and elevations about it; the trophies, festoons, fruitages,

friezes, capitals, pedestals, and other ornaments and decorations about the choir of St. Paul's, executed by Gibbons, and other carvings by the same artist at Chatsworth, the seat of the Duke of Devonshire, and in Trinity College Library at Cambridge. It is even supposed by some that the blocks employed by Holbein, for wood engravings, were of this tree. Dodsley says—

> Smooth Linden best obeys
> The carver's chisel; best his curious work
> Displays, in all its nicest touches.

It is used by piano-forte makers for sounding-boards, and by cabinet-makers for a variety of purposes. The wood is also said to make excellent charcoal for gunpowder, even better than alder, and nearly as good as hazel, while baskets and cradles are made with the twigs of the Lime; and of the smoother side of the bark, tablets for writing; for the ancient Philyra is but our Tilia, of which Munting affirms he saw a book, made of the inner bark, written about 1000 years ago; such another was brought to the Count of St. Amant, governor of Arras, 1662, for which there were given 8000 ducats by the Emperor. It contains a work of Cicero, *De ordinanda Republica et de Inveniendis Orationum Exordiis*, which is still unprinted, and is now in the imperial library of Vienna, after having been the greatest rarity in that of the celebrated Cardinal Mazarin, who died in 1661.

The smoothness of the Lime-tree is thus alluded to by Cowper in the *Task:*

> Here the gray smooth trunks
> Of ash, or Lime, or beech, distinctly shine
> Within the twilight of their distant shades,
> There lost behind a rising ground, the wood
> Seems sunk and shortened to its topmost boughs.

This peculiarity of the bark has also been noticed by Leigh Hunt, in the story of *Rimini:*

> Places of nestling green for poets made,
> Where, when the sunshine struck a yellow shade,
> The slender trunks to inward peeping sight,
> Thronged, in dark pillars, up the gold-green light.

The leaves of the Lime-tree are also useful, and were esteemed so in common with those of the elm and poplar, both in a dried and green state for feeding cattle, by the Romans.

The other two indigenous or naturalized species of Lime are—

2. *The broad-leaved, T. grandifolia.* Ehrh. Flowers without nectaries; leaves roundish, cordate, pointed, serrate, downy, especially beneath, with hairy tufts at the origin of the veins; capsule turbinate, with prominent angles, downy.——*Flowers* in August: found in woods and hedges.

3. *The small-leaved, T. parvifolia.* Ehrh. Flowers without nectaries; leaves scarcely longer than their petioles, roundish, cordate, serrate, pointed, glaucous beneath, with hairy tufts at the origin of the veins, and scattered hairy blotches; capsule roundish, with slender ribs, thin, brittle, nearly smooth.——*A handsome* tree, distinguished from the former by its much smaller leaves and flowers: germen densely woolly: flowers in August: grows in woods in Essex, Sussex, &c.: frequent.

THE MAPLE-TREE.

[*Acer.** Nat. Ord.—*Aceraceæ;* Linn. *Octan. Monog.*]

THE Common Maple (*A. campestre*) is found throughout the middle states of Europe, and in the north of Asia. It is common in hedges and thickets in the middle and south of England, but is rare in the northern counties and in Scotland, and is not indigenous in Ireland. It is a rather small tree, of no great figure, so that it is seldom seen employed in any nobler service than in filling up a part in a

* *Generic characters.* Calyx inferior, 5-cleft. Petals 5, obovate. Fruit consisting of 2 capsules, united at the base, indehiscent and winged (a *samara*). Trees, with simple leaves and flowers, often polygamous, in axillary corymbs or racemes.

hedge, in company with thorns and briers. In a few instances, where it is met with in a state of maturity, its form appears picturesque. It is not much unlike the oak, only it is more bushy, and its branches are closer and more compact. Although it seldom attains a height of more than twenty feet, yet in favourable situations it rises to forty feet, as may be seen in Eastwell Park, Kent, and in Caversham Park, near Reading. The Rev. William Gilpin, from whose *Remarks on Forest Scenery* we have derived much interesting matter, is buried under the shade of a very large Maple in the churchyard of Boldre, in the New Forest, Hampshire.

The botanical characters of *A. campestre* are:—*Leaves* about one and a half inch in width, downy while young, as are their foot-stalks, obtusely five-lobed, here and there notched, sometimes quite entire. Flowers green, in clusters that terminate the young shoots, hairy, erect, short, and somewhat corymbose. Anthers hairy between the lobes. Capsules downy, spreading horizontally, with smooth, oblong, reddish wings. Bark corky, and full of fissures; that of the branches smooth. Flowers in May and June.

The ancients held this tree in great repute. Ovid compares it to the Lime:

> The Maple not unlike the lime-tree grows,
> Like her, her spreading arms abroad she throws,
> Well clothed with leaves, but that the Maple's bole
> Is clad by nature with a ruder stole.

Pliny speaks as highly of its knobs and its excrescences, called the *brusca* and *mollusca*, as Dr. Plot

does of those of the ash. The veins of these excrescences in the Maple, Pliny tells us, were so variegated that they exceeded the beauty of any other wood, even of the citron; though the citron was in such repute at Rome, that Cicero, who was

Leaves, Flowers, and Fruit of *A. campestre*.

neither rich nor expensive, was tempted to give 10,000 sesterces for a citron table. The brusca and mollusca, Pliny adds, were rarely of a size sufficient for the larger species of furniture, but in all smaller cabinet-work they were inestimable. Indeed, the whole tree was esteemed by the ancients on account of its variegated wood, especially the white, which is singularly beautiful. This is called the French Maple, and grows in northern Italy, between the Po and the Alps; the other has a curled grain, so curiously spotted, that it was called, from a near resemblance, the peacock's tail. So mad were people formerly in searching for the representations of birds, beasts, and other objects in the bruscum of this tree, that they spared no expense in procuring it.

The timber is used for musical instruments, inlaying, &c., and is reckoned superior to most woods for turnery ware. Our poets generally place a Maple dish in every hermitage they speak of.

> Methinks that to some vacant hermitage
> My feet would rather turn,—to some dry nook
> Scooped out of living rock, and near a brook
> Hurled down a mountain-cave, from stage to stage,
> Yet tempering, for my sight, its bustling rage
> In the soft haven of a translucent pool;
> Thence creeping under forest arches cool,
> Fit haunt of shapes whose glorious equipage
> Would elevate my dreams. A beechen bowl,
> A Maple dish, my furniture should be;
> Crisp, yellow leaves my bed; the hooting owl
> My night-watch; nor should e'er the crested fowl
> From thorp or vil his matins sound for me,
> Tired of the world and all its industry.
>
> WORDSWORTH, *Eccl. Sk.*, 22.

Wilson and Cowper also furnish the hermit's cell with a Maple dish, while Mason notes one that lacked this article, deemed so requisite for such a habitation :

—Many a visitant
Had sat within his hospitable cave;
From his Maple bowl, the unpolluted spring
Drunk fearless, and with him partook the bread
That his pale lips most reverently had blessed,
With words becoming such a holy man.

His dwelling a recess in some rude rock,
Books, beads, and Maple dish his meagre stock.

—It seemed a hermit's cell,
Yet void of hour-glass, skull, and Maple dish.

There is an American species of the Maple, *A. saccharinum*, which yields a considerable quantity of sap, from which the Canadians make sugar of an average quality. The season for tapping the trees is in February, March, and April. From a pint to five gallons of syrup may be obtained from one tree in a day; though, when a frosty night is succeeded by a dry and brilliant day, the rush of sap is much greater. The yearly product of sugar from each tree is about three pounds. Trees which grow in lone and moist places, afford a greater quantity of sap than those which occupy rising ground; but it is less rich in the saccharine principle. That of insulated trees, left standing in the middle of fields, or by the side of fences, is the best. It is also remarked, that in districts which have been cleared of other trees, and even of the less vigorous sugar maples, the product of the

remainder is proportionally greater. The sap is converted into sugar by boiling, till reduced to the proper consistency for being poured into moulds.

There are now cultivated in England more than twenty species of Maple, brought from every quarter of the globe, several of which are likely to prove hardy. They are among the most ornamental trees of artificial plantations, on account of the great beauty and variety of their foliage, which changes to a fine scarlet, or rich yellow, in autumn. The larger growing species are often many years before they come to flower, and, after they do so, they sometimes flower several years before they mature seeds.

THE MOUNTAIN-ASH, OR ROWAN-TREE.

[*Pyrus.** Nat. Ord.—*Rosaceæ;* Linn.—*Icosan. Pentag.*]

THE Mountain-Ash (*P. aucuparia*) is a native of most parts of Europe, and western Asia. It is also found in Japan, and in the most northern parts of North America. In Britain it is common in woods and hedges in mountainous, but rather moist situations, in every part of the island, and also in Ireland. It forms an erect-stemmed tree, with an

* *Generic characters.* Calyx superior, monosepalous, 5-cleft. Petals 5. Styles 2 to 5. Fruit a *pome*, 5-celled, each cell 2-seeded, cartilaginous.

orbicular head. When fully grown, like every other description of *Pyrus*, it assumes a somewhat formal character, but in a young state its branches are disposed in a more loose and graceful manner. In the Scottish Highlands, according to Lauder, "it becomes a considerable tree. There, on some rocky mountain covered with dark pines and waving birch, which cast a solemn gloom over the lake below, a few Mountain-Ashes, joining in a clump, and mixing with them, have a fine effect. In summer the light green tint of their foliage, and in autumn the glowing berries which hang clustering upon them, contrast beautifully with the deeper green of the pines; and if they are happily blended, and not in too large a proportion, they add some of the most picturesque furniture with which the sides of those rugged mountains are invested."

The stems of the Mountain-Ash are covered with a smooth gray bark, and the branches, while young, have a smooth purplish bark. The leaves are pinnate, downy beneath, serrated; panicle corymbose, with downy stalks; flowers numerous, white; fruit globose, scarlet, acid, and austere. Flowers in May and June.

The Mountain-Ash is almost always raised from seed, which may be sown any time from November to February. The tree grows rapidly for the first three or four years, attaining, in five years, the height of from eight to nine feet; after which it begins to form a head, and, in ten years, will attain the height of twenty feet. As it grows rapidly,

even in the most exposed situations, it forms an admirable nurse-tree to the oak, and other slow-growing species; the more so as it is incapable of being drawn up by culture above a certain height,

Leaves, Flowers, and Fruit of *P. aucuparia.*

thereafter quietly submitting to be over-topped and destroyed, by the shade and drip of those which it was planted to shelter and protect. It is frequently planted for coppice-wood, the shoots being well adapted for poles, and for hoops, and the bark being in demand by tanners. The wood is fine-grained, hard, capable of being stained any colour, and of taking a high polish. It is much used for the husbandman's tools, goads, &c., and the wheelwright values it on account of its being homogeneous, or all heart. If the tree be large and fully grown, it will yield planks, boards, and timber. Next to the yew it was useful for bows—a circumstance we ought not to omit recording, if it were only to perpetuate the celebrity of our once English ancestors. It is named in a statute of Henry VIII. as being serviceable for this purpose. It makes excellent fuel; though Evelyn says he never observed any use, except that the blossoms are of an agreeable scent, and the berries offer such temptation to the thrushes, that, as long as they last, you may be sure of their company. Ale and beer brewed with these berries, being ripe, is esteemed an incomparable drink. In Wales, this tree is reputed so sacred, that there is scarcely a churchyard without one of them growing therein. And formerly—and, we believe, in some parts even now—on a certain day in the year many persons religiously wore a cross made of the wood.

Keats, in his early poems, notices the loftiness of this tree, and its waving head:

—He was withal
A man of elegance and stature tall;
So that the waving of his plumes would be
High as the berries of a wild Ash-tree,
Or the winged cap of Mercury.

In former days, when superstition prevailed, the Mountain-Ash was considered an object of great veneration. Often at this day a stump of it is found in some old burying-place, or near the circle of a Druid temple, whose rites it formerly invested with its sacred shade. It was supposed to be, and in some places still is esteemed to be, possessed of the property of driving away witches and evil spirits, and this property is recorded in one of the stanzas of a very ancient song, called the *Laidley Worm of Spindleston Heughs:*

Their spells were vain, the hags return'd
To the queen, in sorrowful mood,
Crying that witches have no pow'r
Where there is roan-tree wood.

That the superstition respecting the virtues of this tree does exist in Yorkshire at the present day, we know, and of the truth of the following anecdote, related by Waterton, the author of the celebrated *Wanderings*, we have not the slightest doubt; it is printed in one of his communications to the *Magazine of Natural History:*—"In the village of Walton," says Mr. Waterton, "I have two small tenants; the name of one is James Simpson, and that of the other Sally Holloway; and Sally's stands a little before the house of Simpson. Some three months ago I overtook

Simpson on the turnpike road, and I asked him if his cow was getting better, for his son had told me that she had fallen sick. 'She's coming on surprisingly, Sir,' quoth he; 'the last time the cow-doctor came to see her, "Jem," said he to me, looking earnestly at Old Sally's house; "Jem," said he, "mind and keep your cowhouse door shut before the sun goes down, otherwise I won't answer for what may happen to the cow." "Ay, ay, my lad," said I, "I understand your meaning; but I am up to the old slut, and I defy her to do me any harm now!"' 'And what has Old Sally been doing to you, James?' said I. 'Why, Sir,' replied he, 'we all know too well what she can do. She has long owed me a grudge; and my cow, which was in very good health, fell sick immediately after Sally had been seen to look in at the door of the cowhouse, just as night was coming on. The cow grew worse, and so I went and cut a bit of wiggin (Mountain-Ash), and I nailed the branches all up and down the cowhouse; and, Sir, you may see them there if you will take the trouble to step in. I am a match for Old Sally now, and she can't do me any more harm, so long as the wiggin branches hang in the place where I have nailed them. My poor cow will get better in spite of her.' Alas! thought I to myself, as the deluded man was finishing his story, how much there is yet to be done in our own country by the schoolmaster of the nineteenth century!"

The Mountain-Ash, so esteemed among our northern neighbours as a protection against the

evil designs of wizards and witches, is propagated by the Parisians for a very different purpose. It is used as one of the principal charms for enticing the French belles into the public gardens, where they are permitted to use all the spells and witcheries of which they are mistresses; and certainly this tree, ornamented by its brilliant scarlet fruit, has a most enchanting appearance when lighted up with lamps, in the months of August and September.

The varieties of the Mountain-Ash are :—

2. *P. fructu luteo*, with yellow berries. 3. *P. foliis variegatis*, with variegated leaves. 4. *P. fastigiata*, with the branches upright and rigid. 5. *P. pinnatifida*, with deeply pinnatified leaves.

THE BLACK-FRUITED MULBERRY.

[*Morus nigra.** Nat. Ord.—*Urticaceæ;* Linn.—*Monoe. Tetra.*]

THE Black-fruited, or Common Mulberry, is generally supposed to be a native of Persia, where there are still masses of it found in a wild state. It was first brought to England in 1548, when some trees

* *Morus. Flowers* unisexual; *barren* flowers disposed in a drooping, peduncled, axillary spike; *fertile* flowers in ovate, erect spikes. *Calyx* of 4 equal sepals, imbricate in estivation, expanded in flowering. *Stamens* 4. *Ovary* 2-celled, one including one pendulous ovate, the other devoid of any. *Stigmas* 2, long. Seed pendulous.

were planted at Sion, near London, one of which still survives. About 1608 James I. recommended by royal edict, and by letter in his own writing to the lord-lieutenant of every county, the planting of Mulberry-trees and the rearing of silkworms, which are fed upon the leaves; also offering plants at three farthings each, and packets of Mulberry seeds to all who would sow them. Although the king failed to naturalize the production of silk in this country, he rendered the tree so fashionable, that there is scarcely an old garden or gentleman's seat throughout the country, which can be traced back to the seventeenth century, in which a Mulberry tree is not to be found. It was at this time that Shakspeare planted the one in his garden at Stratford-on-Avon, which was known as "Shakspeare's Mulberry-Tree," until it was felled in 1756; and that it was a black Mulberry we learn from Mr. Drake, a native of Stratford, who frequently in his youth ate of its fruit, some branches of which hung over the wall which bounded his father's garden.—Drake's *Shakspeare*, vol. ii., p. 584.

In this country the Black-fruited Mulberry always assumes something of a dwarf or stunted character, spreading into thick arms or branches near the ground, and forming a very large head. The bark is rough and thick, and the leaves cordate, unequally serrated, and very rough. The fruit is large, of a dark purple, very wholesome, and agreeable to the palate. This tree is remarkable for the slowness of its growth, and for

being one of the last trees to develope its leaves, though it is one of the first to ripen its fruit. It is also wonderfully tenacious of life: "the roots of one which had lain dormant in the ground for twenty-four years, being said, after the expiration of that time, to have sent up shoots."

The Black-fruited Mulberry will grow in almost any soil or situation that is moderately dry, and in any climate not much colder than that of London. North of York it requires a wall, except in very favourable situations. It is very easily propagated by truncheons, or pieces of branches, eight or nine feet in length, planted half their depth in tolerably good soil, when they will bear fruit the following year. It is now rarely propagated by seeds, which seldom ripen in this country. No tree, perhaps, receives more benefit from the spade and the dung-hill than the Mulberry; it ought, therefore, to be frequently dug about the roots, and occasionally assisted with manure. The fruit is very much improved by the tree being trained as an espalier, within the reflection of a south wall. As a standard tree, whether for ornament or the production of well-sized fruit, the Mulberry requires very little pruning, or attention of any kind.

The Black-fruited Mulberry has been known from the earliest records of antiquity; it is mentioned four times in the Bible, 2 Sam. v. 23, 24; 1 Chron. xiv. 14, 15. It was dedicated by the Greeks to Minerva, probably because it was considered as the wisest of trees; and Jupiter the Protector was called Mored. Ovid has celebrated

the Black Mulberry in the story of Pyramus and Thisbe; in which he relates that its fruit was snow-white until the commingled blood of the unfortunate lovers, who killed themselves under its shade, was absorbed by its roots, when

> Dark in the rising tide the berries grew,
> And white no longer, took a sable hue;

Leaves and Fruits of *M. nigra*.

But brighter crimson springing from the root,
Shot through the black, and purpled all the fruit.

Cowley, in the fifth book of his poem on plants, has given a very plain and accurate description of the apparently cautious habits of this tree. He also thus alludes to the above fable:

But cautiously the Mulberry did move,
And first the temper of the skies would prove;
What sign the sun was in, and if she might
Give credit yet to winter's seeming flight:
She dares not venture on his first retreat,
Nor trust her fruit or leaves to doubtful heat;
Her ready sap within her bark confines,
Till she of settled warmth has certain signs!
Then, making rich amends for the delay,
With sudden haste she dons her green array;
In two short months her purple fruit appears,
And of two lovers slain the tincture wears.
Her fruit is rich, but she doth leaves produce
Of far surpassing worth, and noble use.
* * * * *
* * * They supply
The ornaments of royal luxury:
The beautiful they make more beauteous seem,
The charming sex owe half their charms to them;
To them effeminate men their vestments owe;
How vain the pride which insect worms bestow!

Besides the Black-fruited Mulberry, there are four other species sufficiently hardy to bear our climate without protection; but it will be here sufficient to give a short account of the White-fruited (*M. alba*) as the next best known, and as the species whose leaves are used in feeding silk-worms. *M. alba*, is only found truly wild in the Chinese province of Seres, or Serica. It was

brought to Constantinople about the beginning of the sixth century, and was introduced into England in 1596, where it is still not very common. In the south of Europe it is grown in plantations by itself, like willows and fruit trees; also in hedge-rows, and as hedges, as far north as Frankfort-on-the-Oder. When allowed to arrive at maturity, this tree is not less beautiful than the fairest elm, often reaching thirty or forty feet in height. When cultivated to furnish food for the silk-worms, the trees are never allowed to grow higher than three or four feet being cut down to the ground every year in the same manner as a raspberry plantation. In France and Italy the leaves are gathered only once a-year; and when the trees are then wholly stripped, no injury arises from the operation; but if any leaves are left on the trees, they generally receive a severe shock.

The specific characters of the White-fruited Mulberry are—*Leaves* with a deep scallop at the base, and either cordate or ovate, undivided or lobed, serrated with unequal teeth, glossy or smoothish, the projecting portions on the two sides of the basal sinus unequal. The *fruit* is seldom good for human food, but is excellent for poultry. It is a tree of rapid growth, attaining the height of twenty feet in five or six years, and plants cut down producing shoots four or five feet long in one season.

THE BRITISH OAK.

[*Quercus.** Nat. Ord.—*Amentiferæ;* Linn.—*Monœc. Polya.*]

> The Oak, when living, monarch of the wood;
> The English Oak, when dead, commands the flood.
>
> CHURCHILL.

On our entrance into the Woodland, the eye first greets the majestic Oak, which is represented as holding the same rank among the plants of the temperate regions throughout the world, that the lion does among quadrupeds, and the eagle among birds; that is to say, it is the emblem of grandeur,

* *Generic characters.* *Barren* flowers arranged in a loose, pendulous catkin, the perianth single, the stamens 5-10. *Fertile* flower in a cupulate, scaly involucrum, with 3 stigmas. *Fruit* an acorn, 1-celled, 1-seeded, seated in the cupulate, scaly involucrum.

strength, and duration; of force that resists, as the lion is of force that acts. In short, its bulk, its longevity, and the extraordinary strength and durability of its timber, constitute it the King of Forest trees. These and other characteristics of the Oak are graphically expressed by the Roman poet:—

Jove's own tree,
That holds the woods in awful sovereignty,
Requires a depth of loading in the ground,
And next the lower skies a bed profound;
High as his topmast boughs to heaven ascend,
So low his roots to hell's dominions tend.
Therefore, nor winds, nor winter's rage o'erthrows
His bulky body, but unmoved he grows.
For length of ages lasts his happy reign,
And lives of mortal men contend in vain.
Full in the midst of his own strength he stands,
Stretching his brawny arms and leafy hands;
His shade protects the plains, his head the hills commands.

Virgil's Georgics, II.

"The Oak grows naturally in the middle and south of Europe; in the north of Africa; and, in Asia, in Natolia, the Himalayas, Cochin-China, and Japan. In America it abounds throughout the greater part of the northern continent, more especially in the United States. In Europe, the Oak has been, and is, more particularly abundant in Britain, France, Spain, and Italy. In Britain two species only are indigenous; in France there are four or five sorts; and in Spain, Italy, and Greece, six or seven sorts. The number of sorts described by botanists as species, and as natives of Europe, exceed 30; and as natives of North Ame-

rica, 40. The latter are all comprised between 20° and 48° N. lat. In Europe, Asia, and Africa, Oaks are found from 60° to 18° N. lat., and even in the Torrid Zone, in situations rendered temperate by their elevation."

In Britain, the Oak is everywhere indigenous, the two species being generally found growing together in a wild state. It, however, requires a soil more or less alluvial or loamy to attain its full size, and to bring its timber to perfection; these being seldom attained in the Highlands of Scotland, where it is still abundant in an indigenous state. The two species, *Q. robur*, or *pedunculata*, and *Q. sessiliflora*, are readily distinguished from each other by the first having the leaves on short stalks, and the acorns on long stalks, the other by the leaves being long-stalked, and the acorns short-stalked. In full-grown trees of the two species there is little or no difference either in magnitude and general appearance, or in quality of timber. *Q. robur* being the most abundant, is called the Common Oak. Its twigs are smooth and grayish-brown: leaves deciduous, sessile, of a thin texture, obovate-oblong, serrated, with the lobes entire, and nearly blunt, diminishing towards the base; a little blistered, and scarcely glossy, with some down occasionally on the under side: acorns oblong, obtuse, much longer than the hemispherical scaly cup, placed on long peduncles. The distinguishing characters of the less common species, *Q. sessiliflora*, the sessile-fruited oak, are, leaves on longish foot-stalks, deciduous, smooth, and oblong, the sinuses oppo-

site, and rather acute, the fruit sessile, oblong. In other respects it so closely resembles the other species, that of the numerous trees recorded for their enormous dimensions, age, and other peculiarities, the species is seldom particularized.

Leaves, Flowers, and Fruit of *Q. robur*.

Loudon believed that no important or constant difference exists between the mode of growth of the two kinds, individuals of both being found equally pyramidal, fastigiate, or orbicular. He considered, however, that *Q. sessiliflora* could "readily be distinguished even at a distance, by the less tufted appearance, and generally palish green of its foliage in summer, and in winter by its less tortuous spray and branches, by its light coloured bark, by its large buds, and by its frequently retaining its leaves after they had withered, till the following spring."

The Oak, says Mr. Gilpin, is confessedly the most picturesque tree in itself, and the most accommodating in composition. It refuses no subject, either in natural or artificial landscape; it is suited to the grandest, and may with propriety be introduced into the most pastoral. It adds new dignity to the ruined tower and Gothic arch; it throws its arms with propriety over the mantling pool, and may be happily introduced into the humblest scene.

> Imperial Oak, a cottage in thy shade
> Finds safety, or a monarch in thy arms:
> Respectful generations see thee spread,
> Careless of centuries, even in decay
> Majestic: thy far-shadowing boughs contend
> With time: the obsequious winds shall visit thee,
> To scatter round the children of thy age,
> And eternize thy latest benefits.
>
> W. Tighe.

The longevity of the Oak is supposed to extend beyond that of any other tree. It is through age

that the Oak acquires its greatest beauty, which often continues increasing, even into decay, if any proportion exists between the stem and the branches. When the branches rot away, and the trunk is left alone, the tree is in its decrepitude, the last stage of life, and all the beauty is gone.

Spenser has given us a good picture of an Oak just verging towards its last stage of decay:

> —A huge Oak, dry and dead,
> Still clad with reliques of its trophies old,
> Lifting to heaven its aged, hoary head,
> Whose foot on earth hath got but feeble hold,
> And, half disbowelled, stands above the ground
> With wreathed roots, and naked arms,
> And trunk all rotten and unsound.

He also compares a gray-headed old man to an aged Oak-tree, covered with frost:

> There they do find that goodly aged sire,
> With snowy locks adown his shoulders shed;
> As hoary frost with spangles doth attire
> The mossy branches of an Oak half dead.

Montgomery, too, does not forget to observe the longevity of the sturdy Oak:

> As some triumphal Oak, whose boughs have spread
> Their changing foliage through a thousand years,
> Bows to the rushing wind its glorious head.

As we before noted, the beauty of almost every species of tree increases after its prime; but unless it hath the good fortune to stand in some place of difficult access, or under the protection of some

patron whose mansion it adorns, we rarely see it in that grandeur and dignity which it would acquire by age. Some of the noblest Oaks in England were, at least formerly, found in Sussex. They required sometimes a score of oxen to draw them, and were carried on a sort of wain, which in that deep country is expressly called a *tugg*. It was not uncommon for it to spend two or three years in performing its journey to the Royal dock-yard at Chatham. One tugg carried the load only a little way, and left it for another tugg to take up. If the rains set in, it stirred no more that year; and frequently no part of the next summer was dry enough for the tugg to proceed: so that the timber was generally pretty well seasoned before it arrived at its destination.

In this fallen state alone, it is true, the tree becomes the basis of England's glory, though we regret its fall. Therefore, we must not repine, but address the children of the wood as the gallant Oak, on his removal from the forest, is said to have addressed the scion by his side:

> Where thy great grandsire spread his awful shade,
> A holy Druid mystic circles made;
> Myself a sapling when thy grandsire bore
> Intrepid Edward to the Gallic shore.
> Me, now my country calls: adieu, my son!
> And, as the circling years in order run,
> May'st thou renew the forest's boast and pride,
> Victorious in some future contest ride.

We are sure that all who can appreciate beauti-

ful poetry will be gratified by the following pathetic lamentation of the elegant Vanier :—

—No greater beauty can adorn
The hamlet, than a grove of ancient Oak.
Ah! how unlike their sires of elder times
The sons of Gallia now! They, in each tree
Dreading some unknown power, dared not to lift
An axe. Though scant of soil, they rather sought
For distant herbage, than molest their groves.
Now all is spoil and violence. Where now
Exists an Oak, whose venerable stem
Has seen three centuries? unless some steep,
To human footstep inaccessible,
Defend a favour'd plant. Now, if some sire
Leave to his heir a forest scene, that heir,
With graceless hands, hews down each awful trunk,
Worthy of Druid reverence. There he rears
A paltry copse, destined, each twentieth year,
To blaze inglorious on the hearth. Hence woods,
Which shelter'd once the stag and grisly boar,
Scarce to the timorous hare sure refuge lend.
Farewell each rural virtue, with the love
Of rural scenes! Sage Contemplation wings
Her flight; no more from burning suns she seeks
A cool retreat. No more the poet sings,
Amid re-echoing groves, his moral lay.

As it is thus a general complaint that noble trees are rarely to be found, we must seek them where we can, and consider them, when found, as matters of curiosity, and pay them a due respect. And yet, we should suppose, they are not so frequently found here in a state of nature as in more uncultivated countries. In the forests of America, and other scenes, they have filled the plains from the beginning of time; and where they grow so close, and cover the ground with so impervious a

shade that even a weed can scarce rise beneath them, the single tree is lost. Unless it stand on the outskirt of the wood, it is circumscribed, and has not room to expand its vast limbs as nature directs. When we wish, therefore, to find the most sublime sylvan character, the Oak, the elm, or the ash, in perfection, we must not look for it in close, thick woods, but standing single, independent of all connections, as we sometimes find it in our own forests, though oftener in better protected places, shooting its head wildly into the clouds, spreading its arms towards every wind of heaven :

—The Oak
Thrives by the rude concussion of the storm.
He seems indignant, and to feel
The impression of the blast with proud disdain;
But, deeply earth'd, the unconscious monarch owes
His firm stability to what he scorns:
More fix'd below, the more disturb'd above.

Again, we are told that the foliage of the Oak is

Tenacious of the stem, and firm against the wind.

The shade of the Oak-tree has been a favourite theme with British poets. Thomson, speaking of Hagley Park, the seat of his friend Littleton, calls it the British Tempe, and describes him as courting the muse beneath the shade of solemn Oaks :

—There, along the dale
With woods o'erhung, and shagged with mossy rocks,
Whence on each hand the gushing waters play,
And down the rough cascade white dashing fall,
Or gleam in lengthened vista through the trees,
You silent steal; or sit beneath the shade
Of solemn Oaks, that tuft the swelling mounts,

Thrown graceful round by Nature's careless hand,
And pensive listens to the various voice
Of rural peace: the herds, the flocks, the birds,
The hollow whispering breeze, the plaint of rills,
That, purling down amid the twisted roots
Which creep around, their dewy murmurs shake
On the soothed ear.

Wordsworth also mentions the fine broad shade of the spreading Oak:

Beneath that large old Oak, which near their door
Stood, and, from its enormous breadth of shade,
Chosen for the shearer's covert from the sun,
Thence, in our rustic dialect, was called
The clipping tree: a name which yet it bears.

The Oaks of Chaucer are particularly celebrated, as the trees under which

—The laughing sage
Caroll'd his moral song.

They grew in the park at Donnington Castle, near Newbury, where Chaucer spent his latter life in studious retirement. The largest of these trees was the King's Oak, and carried an erect stem of fifty feet before it broke into branches, and was cut into a beam five feet square. The next in size was called the Queen's Oak, and survived the calamities of the civil wars in King Charles's time, though Donnington Castle and the country around it were so often the scenes of action and desolation. Its branches were very curious: they pushed out from the stem in several uncommon directions, imitating the horns of a ram, rather than the branches of an Oak. When it was felled, it yielded a beam forty feet long, without knot or blemish, perfectly straight,

four feet square at the butt end, and near a yard at the top. The third of these Oaks was called Chaucer's, of which we have no particulars; in general only we are told, that it was a noble tree, though inferior to either of the others. Not one of them, we should suppose, from this account, to be a tree of picturesque beauty. A straight stem, of forty or fifty feet, let its head be what it will, can hardly produce a picturesque form.

Close by the gate of the water-walk at Magdalen College, Oxford, grew an Oak, which, perhaps, stood there a sapling when Alfred the Great founded the University. This period only includes a space of nine hundred years, which is no great age for an Oak. It is a difficult matter indeed, to ascertain the age of a tree. The age of a castle, or abbey, is an object of history: even a common house is recorded by the family that built it. All these objects arrive at maturity in their youth, if we may so speak; but the tree, gradually completing its growth, is not worth recording in the early part of its existence. It is then only a common tree; and afterwards, when it becomes remarkable for its age, all memory of its youth is lost. This tree, however, can almost produce historical evidence for the age assigned to it. About five hundred years after the time of Alfred, William of Wainfleet, Dr. Stukely tells us, expressly ordered his college to be founded near the Great Oak; and an Oak could not, we think, be less than five hundred years of age to merit that title, together with the honour of fixing the site of a college. When

the magnificence of Cardinal Wolsey erected that handsome tower which is so ornamental to the whole building, this tree might probably be in the meridian of its glory, or rather, perhaps, it had attained a green old age. But it must have been manifestly in its decline at that memorable period when the tyranny of James gave the Fellows of Magdalen so noble an opportunity of withstanding bigotry and superstition. It was afterwards much injured in Charles II.'s time, when the present walks were laid out. The roots were disturbed, and from that period it rapidly declined, and became reduced by degrees to little more than a mere trunk. The faithful records of history have handed down its ancient dimensions. Through a space of sixteen yards on every side from its trunk, it once flung its boughs; and then its magnificent pavilion could have sheltered with ease three thousand men; though, in its decayed state, it could for many years do little more than shelter some luckless individual, whom the drenching shower had overtaken in his evening walk. In the summer of the year 1788, this magnificent ruin fell to the ground, alarming the College with its rushing sound. It then appeared how precariously it had stood for many years. Its grand tap-root was decayed, and it had hold of the earth only by two or three roots, of which none was more than a couple of inches in diameter. From a part of its ruin a chair has been made for the President of the College, which will long continue its memory.

Near Worksop grew an Oak, which, in respect

both to its own dignity and the dignity of its situation, deserves honourable mention. In point of grandeur, few trees equalled it. It overspread a space of ninety feet from the extremities of its opposite boughs. These dimensions will produce an area capable, on mathematical calculation, of covering a squadron of two hundred and thirty-five horse. The dignity of its station was equal to the dignity of the tree itself. It stood on a point where Yorkshire, Nottinghamshire, and Derbyshire unite, and spread its shade over a portion of each. From the honourable station of thus fixing the boundaries of three large counties, it was equally respected through the domains of them all, and was known far and wide by the honourable distinction of the Shire-Oak, by which appellation it was marked among cities, towns, and rivers, in all the larger maps of England.

Gilpin gives us a singular account of an Oak tree that formerly stood in the New Forest, Hampshire, against which, according to tradition, the arrow of Sir Walter Tyrrell glanced which killed William Rufus. According to Leland, and Camden from him, this tree stood at a place called Througham, where a chapel was erected to the king's memory. But there is now not any place of that name in the New Forest, nor the remains or remembrance of any chapel. It is, however, conjectured that Throughham might be what is at present called Fritham, where the tradition of the country seems to have fixed the spot with more credibility than the tree. It is probable that the

chapel was only some little temporary oratory, which, having never been endowed, might very soon fall into decay: but the tree, we may suppose, would be noticed at the time by everybody who lived near it, and by strangers who came to see it; and it is as likely that it never could be forgotten afterwards. Those who regard a tree as an insufficient record of an event so many centuries back, may be reminded that seven hundred years (and it is little more than that since the death of Rufus) is no extraordinary period in the existence of an Oak. About one hundred years ago, however, this tree had become so decayed and mutilated, that it is probable the spot would have been completely forgotten if some other memorial had not been raised. Before the stump, therefore, was eradicated, Lord Delaware, who occupied one of the neighbouring lodges, caused a triangular stone to be erected, on the three sides of which the following inscriptions are engraved:—

I.

Here stood the Oak-tree, on which an arrow, shot by Sir Walter Tyrrel at a stag, glanced, and struck King William II., surnamed Rufus, in the breast, of which stroke he instantly died, on the 2d of August, 1100.

II.

King William II., being thus slain, was laid on a cart belonging to one Purkess, and drawn from hence to Winchester, and buried in the Cathedral Church of that city.

III.

That the spot where an event so memorable happened, might not hereafter be unknown, this stone was set up by John Lord Delaware, who has seen the tree growing in this place.

Lord Delaware here asserts plainly that he had seen the Oak-tree; and as he resided much near the place, there is reason to believe that he had other grounds for the assertion besides the mere tradition of the country. That matter, however, rests on his authority.

Gilpin likewise gives us the following account of the Cadenham Oak, in the New Forest, which was remarkable for putting forth its buds in the depth of winter. Cadenham is a village about three miles from Lyndhurst, on the road to Salisbury:—

"Having often heard of this Oak, I took a ride to see it on December 29, 1781. It was pointed out to me among several other Oaks, surrounded by a little forest stream, winding round a knoll on which they stood. It is a tall straight plant, of no great age, and apparently vigorous, except that its top has been injured, from which several branches issue in the form of pollard shoots. It was entirely bare of leaves, as far as I could discern, when I saw it, and undistinguishable from the other Oaks in its neighbourhood, except that its bark seemed rather smoother, occasioned, I apprehended, only by frequent climbing.

"Having had the account of its early budding confirmed on the spot, I engaged one Michael Lawrence, who kept the White Hart, a small alehouse in the neighbourhood, to send me some of the leaves to Vicar's Hill, as soon as they should appear. The man, who had not the least doubt about the matter, kept his word, and sent me several twigs on the morning of January 5, 1782, a few

hours after they had been gathered. The leaves were fairly expanded, and about an inch in length. From some of the buds two leaves had unsheathed themselves, but in general only one.

"Through what power in nature this strange premature vegetation is occasioned, I believe no naturalist can explain. I sent some of the leaves to one of the ablest botanists we have, Mr. Lightfoot, author of the *Flora Scotica*, and was in hopes of hearing something satisfactory on the subject. But he is one of those philosophers who are not ashamed of ignorance where attempts at knowledge are mere conjecture. He assured me he neither could account for it in any way, nor did he know of any other instance of premature vegetation, except the Glastonbury thorn. The philosophers of the forest, in the meantime, account for the thing at once, through the influence of old Christmas day, universally believing that the Oak buds on that day, and that only. The same opinion is held with regard to the Glastonbury thorn, by the common people of the west of England. But, without doubt, the vegetation there is gradual, and forwarded or retarded by the mildness or severity of the weather. One of its progeny, which grew in the gardens of the Duchess Dowager of Portland, at Bulstrode, had its flower-buds perfectly formed so early as December 21, 1781, which is fifteen days earlier than it ought to flower, according to the vulgar prejudice.

"This early spring, however, of the Cadenham Oak, is of very short duration. The buds, after

unfolding themselves, make no farther progress, but immediately shrink from the season and die. The tree continues torpid, like other deciduous trees, during the remainder of the winter, and vegetates again in the spring, at the usual season. I have seen it in full leaf in the middle of summer, when it appeared, both in its form and foliage, exactly like other Oaks.

"I have been informed that another tree, with the same property of early vegetation, has lately been found near the spot where Rufus's monument stands. If this be the case, it seems in some degree to authenticate the account which Camden gives us of the scene of that prince's death; for he speaks of the premature vegetation of that very tree on which the arrow of Tyrrel glanced, and the tree I now speak of, if it really exist, though I have no sufficient authority for it, might have been a descendant of the old Oak, and hence inherited its virtues.

"It is very probable, however, there may be other Oaks in the forest which may likewise have the property of early vegetation. I have heard it often suspected, that people gather buds from other trees and carry them, on old Christmas day, to the Oak at Cadenham, from whence they pretend to pluck them; for that tree is in such repute, and resorted to annually by so many visitants, that I think it could not easily supply all its votaries without some foreign contributions. Some have accounted for this phenomenon by supposing that leaves have been preserved over the year by

being steeped in vinegar. But I am well satisfied this is not the case. Mr. Lightfoot, to whom I sent the leaves, had no such suspicion."

In the *Salisbury Journal*, January 10, 1781, the following paragraph appeared:—

"In consequence of a report that has prevailed in this country for upwards of two centuries, and which by many has been almost considered as a matter of faith, that the Oak at Cadenham, in the New Forest, shoots forth leaves on every old Christmas day, and that no leaf is ever to be seen on it, either before or after that day, during the winter; a lady, who is now on a visit in this city, and who is attentively curious in every thing relative to art or nature, made a journey to Cadenham on Monday, the 3d instant, purposely to inquire, on the spot, about the production of this famous tree. On her arrival near it, the usual guide was ready to attend her; but on his being desired to climb the Oak, and to search whether there were any leaves then on it, he said it would be to no purpose, but that if she would come on the Wednesday following (Christmas day), she might certainly see thousands. However, he was prevailed on to ascend, and on the first branch which he gathered appeared several fair new leaves, fresh sprouted from the buds, and nearly an inch and a half in length. It may be imagined that the guide was more amazed at this premature production than the lady; for so strong was his belief in the truth of the whole tradition, that he would have pledged his life that

not a leaf was to have been discovered on any part of the tree before the usual hour.

"But though the superstitious part of this ancient legend is hence confuted, yet it must be allowed there is something very uncommon and curious in an Oak constantly shooting forth leaves at this unseasonable time of the year, and that the cause of it well deserves the philosophical attention of the botanist. In some years there is no doubt that this Oak may show its first leaves on the Christmas morning, as probably as on a few days before; and this perhaps was the case in the last year, when a gentleman of this neighbourhood, a nice and critical observer, strictly examined the branches, not only on the Christmas morn, but also on the day prior to it. On the first day not a leaf was to be found, but on the following every branch had its complement, though they were then but just shooting from the buds, none of them being more than a quarter of an inch long. The latter part of the story may easily be credited—that no leaves are to be seen on it after Christmas day—as large parties yearly assemble about the Oak on that morning, and regularly strip every appearance of a leaf from it."

At Elderslie, near Paisley, upon a little knoll, there stood, near the end of the last century, the ruins of an Oak, which was supposed to be the largest tree that ever grew in Scotland. The trunk was then wholly decayed and hollow, but it was evident, from what remained, that its diameter could not have been less than eleven or twelve feet.

As to its age, we can only conjecture, from some circumstances, that it is most likely a tree of great antiquity. The little knoll whereon it stands is surrounded by a swamp, over which a causeway leads to the tree, or rather to a circle which seems to have run round it. The vestiges of this circle, as well as the causeway, bear a plain resemblance to those works which are commonly attributed to the Druids, so that this tree was probably a scene of worship consecrated by these heathen priests. But the credit of it does not depend on the dubious vestiges of Druid antiquity. In a latter scene of greater importance (if tradition ever be the vehicle of truth) it bore a large share. When the illustrious and renowned hero, William Wallace, roused the spirit of the Scotch nation to oppose the tyranny of Edward, he frequently chose the solitude of Torwood as a place of rendezvous for his army. There he concealed his numbers and his designs, sallying out suddenly on the enemy's garrisons, and retreating as suddenly when he feared to be overpowered. While his army lay in those woods, the Oak which we are now commemorating was commonly his head-quarters. There the hero generally slept, its hollow trunk being sufficiently capacious, not only to afford shelter to himself, but also to many of his followers. This tree has ever since been known by the name of Wallace tree.

In the enclosure known as the Little Park, in Windsor Forest, there is still standing the supposed Oak immortalized by Shakspeare as the scene of Hern the hunter's exploits :—

—An old tale goes, that Hern the hunter,
Sometime a keeper here in Windsor Forest,
Doth all the winter time, at still of midnight,
Walk round about this Oak, with ragged horns;
And then he blasts the trees, destroys the cattle,
Makes the milch cow yield blood, and shakes a chain
In hideous, dreadful manner.

Merry Wives, iv. 3.

This tree measures about twenty-four feet in circumference, and is yet vigorous, which somewhat injures its historical credit. For though it is evidently a tree advanced in years, and might well have existed in the time of Elizabeth, it seems too strong and vigorous to have been a proper tree, in that age, for Hern the hunter to have danced round. Fairies, elves, and that generation of people, are universally supposed to select the most ancient and venerable trees to gambol under; and the poet who should describe them dancing under a sapling, would show very little acquaintance with his subject. That this tree could not be called a venerable tree two centuries ago is evident, because it can scarcely assume that character even now. And yet an Oak, in a soil it likes, will continue so many years in a vigorous state, that we must not lay more stress on this argument than it will fairly bear. It may be added, however, in its favour, that a pit, or ditch, is still shown near the tree, as Shakspeare describes it, which may have been preserved with the same veneration as the tree itself.

There is an Oak in the grounds of Sir Gerrard Van Neck, at Heveningham, in Suffolk, which car-

ries us likewise into the times of Elizabeth. But this tree brings its evidence with it—evidence which, if necessary, might carry it into the Saxon times. It is now falling fast into the decline of years, and every year robs it more of its honours. But its trunk, which is thirty-five feet in circumference, still retains its grandeur, though the ornaments of its boughs and foliage are much reduced. But the grandeur of the trunk consists only in appearance; it is a mere shell. In Queen Elizabeth's time it was hollow, and from this circumstance the tree derives the honour of being handed down to posterity. That princess, who from her earliest years loved masculine amusements, used often, it is said, in her youth, to take her stand in this tree and shoot the deer as they passed. From that time it has been known by the name of Queen Elizabeth's Oak.

The Swilcar Oak, in the Forest of Needwood, in Staffordshire, was measured about 1771, and found to be nineteen feet in girth at six feet from the ground; and when measured in 1825 it was twenty-one feet four inches and a half in circumference at the same height from the ground. This proves that the tree is slowly increasing, having gained two feet four inches in fifty-four years, and yet it is known, by historical documents, to be six hundred years old. Though in decay it is still a fine, shapely, characteristic tree. It stands in an open lawn, surrounded by extensive woods. In a poem entitled *Needwood Forest* the author thus addresses it:—

Hail! stately Oak, whose wrinkled trunk hath stood,
Age after age, the sovereign of the wood:
You, who have seen a thousand springs unfold
Their ravelled buds, and dip their flowers in gold—
Ten thousand times yon moon relight her horn,
And that bright eye of evening gild the morn,—
* * * * * * * * *
Yes, stately Oak, thy leaf-wrapped head sublime
Ere long must perish in the wrecks of time;
Should, o'er thy brow, the thunders harmless break,
And thy firm roots in vain the whirlwinds shake,
Yet must thou fall. Thy withering glories sunk,
Arm after arm shall leave thy mouldering trunk.

The Cowthorpe, or Coltsthorpe Oak, near Wetherby, in Yorkshire, had its principal branch rent off by a storm in the year 1718, when it was accurately measured, and found to contain more than five tons of timber. Previous to this mutilation, its branches are said to have extended over half an acre of ground. At three feet from the ground, this most gigantic of all trees is sixteen yards, or forty-eight feet, and close to the root it is twenty-six yards, or seventy-eight feet, in girth! Its principal limb projects forty-eight feet from the trunk. It is still in wonderful preservation, though its foliage is thin. It has been called the King of the British Sylva, and, indeed, it deserves the title, and proud we may be of such a king.

There were two trees in Yardley Forest, called Gog and Magog, which demand our notice on account of one of them having been celebrated by the muse of Cowper. The scenery in which they stood is hallowed by his shade. He was fond of indulging his melancholy minstrel musings among the

woodland scenery there. Gog, the larger of these two Oaks, measured thirty-eight feet round at the roots, and was twenty-eight feet in circumference at three feet from the ground. It was fifty-eight feet high, and contained one thousand six hundred and sixty-eight feet seven inches of solid timber. Magog was only forty-nine feet in height; but its circumference was fifty-four feet four inches at the ground, and thirty-one feet three at three feet high. These two trees were near each other, and although a good deal bared at the top by age, they were very picturesque. We shall quote here the whole of Cowper's Address to the "Yardley Oak"; from which it would appear that only one of them then remained:—

Survivor sole, and hardly such, of all
That once lived here, thy brethren, at my birth
(Since which I number threescore winters pass'd)
A shatter'd veteran, hollow-trunk'd perhaps,
As now, and with excoriate forks deform,
Relics of ages! Could a mind, imbued
With truth from Heaven, created thing adore,
I might with reverence kneel, and worship thee.
It seems idolatry with some excuse,
When our forefather Druids in their Oaks
Imagined sanctity. The conscience, yet
Unpurified by an authentic act
Of amnesty, the meed of blood Divine,
Loved not the light; but, gloomy, into gloom
Of thickest shades, like Adam after taste
Of fruit proscribed, as to a refuge, fled.
Thou wast a bauble once; a cup and ball,
Which babes might play with; and the thievish jay,
Seeking her food, with ease might have purloin'd
The auburn nut that held thee, swallowing down
Thy yet close-folded latitude of boughs,

And all thine embryo vastness at a gulp.
But Fate thy growth decreed; autumnal rains
Beneath thy parent tree mellow'd the soil
Design'd thy cradle; and a skipping deer,
With pointed hoof dibbling the glebe, prepared
The soft receptacle, in which, secure,
Thy rudiments should sleep the winter through.
So Fancy dreams. Disprove it, if ye can,
Ye reasoners broad awake, whose busy search
Of argument, employ'd too oft amiss,
Sifts half the pleasure of sweet life away!
Thou fell'st mature; and in the loamy clod,
Swelling with vegetative force instinct,
Didst burst thine egg, as theirs the fabled Twins,
Now stars; two lobes, protruding, pair'd exact;
A leaf succeeded, and another leaf;
And, all the elements thy puny growth
Fostering propitious, thou becamest a twig.
Who lived, when thou wast such? O, couldst thou speak,
As in Dodona once thy kindred trees
Oracular, I would not curious ask
The future, best unknown, but at thy mouth
Inquisitive, the less ambiguous past.
By thee I might correct, erroneous oft,
The clock of history, facts and events
Timing more punctual, unrecorded facts
Recovering, and misstated setting right—
Desperate attempt, till trees shall speak again!
Time made thee what thou wast, king of the woods;
And Time hath made thee what thou art—a cave
For owls to roost in. Once thy spreading boughs
O'erhung the champaign; and the numerous flocks
That grazed it, stood beneath that ample cope
Uncrowded, yet safe-sheltered from the storm.
No flock frequents thee now. Thou hast outlived
Thy popularity, and art become
(Unless verse rescue thee awhile) a thing
Forgotten, as the foliage of thy youth.
While thus through all the stages thou hast push'd
Of treeship—first a seedling hid in grass;
Then twig; then sapling; and, as century roll'd
Slow after century, a giant bulk

Of girth enormous, with moss-cushioned root
Upheaved above the soil, and sides emboss'd
With prominent wens globose—till at the last
The rottenness, which time is charged to inflict
On other mighty ones, found also thee.
What exhibitions various hath the world
Witness'd of mutability in all
That we account most durable below!
Change is the diet on which all subsist,
Created changeable, and change at last
Destroys them. Skies uncertain now the heat
Transmitting cloudless, and the solar beam
Now quenching in a boundless sea of clouds—
Calm and alternate storm, moisture and drought,
Invigorate by turns the springs of life
In all that live—plant, animal, and man—
And in conclusion mar them. Nature's threads,
Fine passing thought, ev'n in her coarsest works,
Delight in agitation, yet sustain
The force that agitates, not unimpair'd;
But, worn by frequent impulse, to the cause
Of their best tone their dissolution owe.
Thought cannot spend itself, comparing still
The great and little of thy lot, thy growth
From almost nullity into a state
Of matchless grandeur, and declension thence,
Slow, into such magnificent decay.
Time was, when, settling on thy leaf, a fly
Could shake thee to the root—and time has been
When tempests could not. At thy firmest age
Thou hadst within thy bole solid contents,
That might have ribb'd the sides and plank'd the deck
Of some flagg'd admiral; and tortuous arms,
The shipwright's darling treasure, didst present
To the four-quarter'd winds, robust and bold,
Warp'd into tough knee-timber,* many a load!
But the axe spared thee. In those thriftier days
Oaks fell not, hewn by thousands, to supply

* Knee-timber is found in the crooked arms of Oak, which, by reason of their distortion, are easily adjusted to the angle formed where the deck and the ship's sides meet.

The bottomless demands of contest, waged
For senatorial honours. Thus to Time
The task was left to whittle thee away
With his sly scythe, whose ever-nibbling edge,
Noiseless, an atom, and an atom more,
Disjoining from the rest, has, unobserved,
Achieved a labour, which had far and wide,
By man perform'd, made all the forest ring.
Embowell'd now, and of thy ancient self
Possessing naught but the scoop'd rind, that seems
A huge throat, calling to the clouds for drink,
Which it would give in rivulets to thy root—
Thou temptest none, but rather much forbidst
The feller's toil, which thou couldst ill requite.
Yet is thy root sincere, sound as the rock,
A quarry of stout spurs and knotted fangs,
Which, crook'd into a thousand whimsies, clasp
The stubborn soil, and hold thee still erect.
So stands a kingdom, whose foundation yet
Fails not, in virtue and in wisdom laid;
Though all the superstructure, by the tooth
Pulverised of venality, a shell
Stands now, and semblance only of itself!
Thine arms have left thee. Winds have rent them off
Long since, and rovers of the forest wild
With bow and shaft have burn'd them. Some have left
A splinter'd stump, bleach'd to a snowy white;
And some, memorial none where once they grew.
Yet life still lingers in thee, and puts forth
Proof not contemptible of what she can,
Even where death predominates. The spring
Finds thee not less alive to her sweet force,
Than yonder upstarts of the neighbouring wood,
So much thy juniors, who their birth received
Half a millennium since the date of thine.
But since, although well qualified by age
To teach, no spirit dwells in thee, nor voice
May be expected from thee, seated here
On thy distorted root, with hearers none,
Or prompter, save the scene—I will perform,
Myself the oracle, and will discourse
In my own ear such matter as I may.

One man alone, the father of us all,
Drew not his life from woman; never gazed,
With mute unconsciousness of what he saw,
On all around him; learn'd not by degrees,
Nor owed articulation to his ear;
But, moulded by his Maker into man
At once, upstood intelligent, survey'd
All creatures, with precision understood
Their purport, uses, properties, assign'd
To each his name significant, and, fill'd
With love and wisdom, render'd back to Heaven,
In praise harmonious, the first air he drew.
He was excused the penalties of dull
Minority. No tutor charged his hand
With the thought-tracing quill, or task'd his mind
With problems. History, not wanted yet,
Lean'd on her elbow, watching Time, whose course
Eventful should supply her with a theme.

Montgomery inscribed the following lines under a drawing of the Yardley Oak, celebrated in the preceding quotation from Cowper:—

The sole survivor of a race
Of giant Oaks, where once the wood
Rang with the battle or the chase,
In stern and lonely grandeur stood.

From age to age it slowly spread
Its gradual boughs to sun and wind;
From age to age its noble head
As slowly wither'd and declined.

A thousand years are like a day,
When fled;—no longer known than seen;
This tree was doom'd to pass away,
And be as if it *ne'er* had been;—

Bnt mournful Cowper, wandering nigh,
For rest beneath its shadow came,
When, lo! the voice of days gone by
Ascended from its hollow frame.

O that the Poet had reveal'd
The words of those prophetic strains,
Ere death the eternal mystery seal'd
——Yet in his song the Oak remains.

And fresh in undecaying prime,
There may it live, beyond the power
Of storm and earthquake, Man and Time,
Till Nature's conflagration-hour.

There are various opinions as to the best mode of rearing Oak-trees; we shall here state that which Evelyn considered the best. In raising Oak-trees from acorns sown in the seminary, a proper situation should be prepared by the time the seeds are ripe. The soil should be loamy, fresh, and in good heart. This should be well prepared by digging, breaking the clods, clearing it of weeds, stones, &c. The acorns should be collected from the best trees; and if allowed to remain until they fall off, they will germinate the better. Sow the acorns in beds about three inches asunder, press them down gently with the spade, and rake the earth over the acorns until it is raised about two inches above them. The plants will not appear in less than two months; and here they may be allowed to remain for two years at least, without any further care than keeping them free from weeds, and occasionally refreshing them with water in dry weather.

When the plants are two years old they will be of a proper size for planting out, and the best way to do this is by trenching or ploughing as deeply as the soil will allow. The sets should be planted about the end of October. This operation should be commenced by striking the plants carefully out

of the seed-bed, shortening the tap-root, and topping off part of the side shoots, that there may be an equal degree of strength in the stem and the root. After planting they should be well protected from cattle, and, if possible, from hares and rabbits. They must also be kept clear from weeds.

Mr. Evelyn was of opinion, that Oaks thus raised will yield the best timber. And Dr. Hunter remarks, that the extensive plantations which were made towards the end of the last century, were made more with a view to shade and ornament than to the propagation of good timber ; and with this object the owners planted their trees generally too old, so that many of the woods, when they come to be felled, will greatly disappoint the expectations of the purchaser.

Oaks are about eighteen years old before they yield any fruit, a peculiarity which seems to indicate the great longevity of the tree ; for "soon ripe and soon rotten," is an adage that holds generally throughout the organic world. The Oak requires sixty or seventy years to attain a considerable size ; but it will go on increasing and knowing no decay for centuries, and live for more than 1000 years.

In reference to the durability of Oak timber when used in ship-building, the following statement has been elicited by a Select Committee appointed to inquire into the cause of the increased number of shipwrecks. The Sub-Committee addressed a letter to the Lords of the Admiralty, who consulted the officers of the principal dock-yards, and returned

the following abstract account of the officers of the yards' opinion on the durability of Oak timber :—

OAK TIMBER.	When used for Floors and Lower Futtocks only.		When used for planking above light watermark	When used for the Upper Timbers.
	In Midships.	Afore and Abaft.		
English.	From 100to 24 years. Average of yards 42	From 20 to 12 years. - 15 -	From 20 to 12 years. - 16 -	From 30 to 15 years. - 20 -
Of the growth of the North of Europe.	From 30 to 9 years. Average of yards 18	From 15 to 8 years. - 10 -	From 12 to 4 years. - 9 -	From 15 to 4 years. - 10 -
Of the growth of the British North American Colonies, generally known as Quebec white Oak.	From 30 to 5 years. Average of yards 17	From 15 to 3 years. - 9 -	From 12 to 2 years. - 9 -	From 16 to 2 years. - 11 -

THE ORIENTAL PLANE.

[*Platanus* orientalis.* Nat. Ord.—*Platanaceæ;* Linn.—*Monœ. Polya.*]

THE Oriental Plane is a native of Greece, and of other parts of the Levant; it is found in Asia Minor, Persia, and eastward to Cashmere; and likewise in Barbary, in the south of Italy, and in Sicily, although probably not indigenous in these

* *Platanus. Flowers* unisexual, the barren and fertile upon one plant, disposed many together, and densely, in globular catkins. *Pistils* numerous, approximately pairs. *Ovary* 1-celled, including 1-2 pendulous ovules. *Stigmas* 2, long, filiform, glandular in the upper part. *Fruit* autricle, densely covered with articulated hairs, including one pendulous, oblong, exalbuminous seed.

countries. It appears to have been introduced into England about the middle of the sixteenth century; but seems not to have been propagated to the extent it deserves, even as an ornamental tree; and the specimens now in existence are neither very numerous, nor are they distinguished for their dimensions.

In the East, the Oriental Plane grows to the height of seventy feet and upwards, with widely spreading branches and a massive trunk; forming altogether a majestic tree. The trunk is covered with a smooth bark, which scales off every year in large irregular patches, often producing a pleasing variety of tint. The bark of the younger branches is of a dark brown, inclined to a purple colour. The leaves are alternate, about seven inches long and eight broad, deeply cut into five segments, and the two outer ones slightly cut into two more. These segments are acutely indented on their borders, each having a strong midrib, with numerous lateral veins. The upper side of the leaves is a deep green, the under side pale. The petioles are rather long, with an enlargement at the base which covers the nascent buds. The catkins which contain the seed are of a globular form, and from two to five in number, on axillary peduncles; they vary greatly in size, and are found from four inches to scarcely one in circumference. The flowers are very minute. The balls, which are about the size of walnuts, and fastened together often in pairs like chain-shot, appear before the leaves in spring, and the seed ripens late in autumn; these are

small, not unlike the seed of the lettuce, and are surrounded or enveloped in a bristly down.

Of the Oriental Plane Loudon remarks, "As an ornamental tree, no one which attains so large a size has a finer appearance, standing singly, or in

Leaves and Globes of Flowers of *P. orientalis.*

small groups, upon a lawn, where there is room to allow its lower branches, which stretch themselves horizontally to a considerable distance, gracefully to bend toward the ground, and turn up at their extremities. The peculiar characteristics of the tree, indeed, is the combination which it presents of majesty and gracefulness; an expression which is produced by the massive, and yet open and varied character, of its head, the bending of its branches, and their feathering to the ground. In this respect it is greatly superior to the lime-tree, which comes nearest to it in the general character of the head; but which forms a much more compact and lumpish mass of foliage in summer, and, in winter, is so crowded with branches and spray, as to prevent, in a great measure, the sun from penetrating through them. The head of the Oriental Plane, during sunshine, often abounds in what painters call flickering lights; the consequence of the branches of the head separating themselves into what may be called horizontal undulating strata—or, as it is called in artistic phraseology, tufting—easily put in motion by the wind, and through openings in which the rays of the sun penetrate, and strike on the foliage below. The tree is by no means so suitable, as most others, for an extensive park, or for imitations of forest scenery; but, from its mild and gentle expression, its usefulness for shade in summer, and for admitting the sun in winter, it is peculiarly adapted for pleasure grounds, and, where there is room, for planting near houses and buildings. For the

latter purpose, it is particularly well adapted even in winter, for the colour of the bark of the trunk, which has a grayish white tint, is not unlike the colour of some kinds of freestone. The colour of the foliage, in dry soil, is also of a dull grayish green; which, receiving the light in numerous horizontal tuftings, readily harmonizes with the colour of stone walls. It appears, also, not to be much injured by smoke, since there are trees of it of considerable size in the very heart of London."

The Oriental Plane thrives best on a light free soil, moist, but not wet at bottom; and the situation should be sheltered, but not shaded or crowded by other trees. It will scarcely grow in strong clays and on elevated exposed places; nor will it thrive in places where the lime-tree does not prosper. It may be propagated by seeds, layers, or cuttings. The general practice is to sow the seeds in autumn, covering them over as lightly as those of the birch and alder, or beating them in with the back of the spade, and not covering them at all, and protecting the beds with litter to exclude the frost. The plants will come up the following year, and will be fit, after two years' growth, to run into nursery lines; from whence they may be planted into their permanent stations in two or three years, according to the size considered necessary. The growth of this tree is very rapid, attaining in the climate of London, under favourable circumstances, the height of thirty feet in ten years, and arriving at the height of sixty or seventy feet in thirty years. The longevity of

this tree was supposed, by the ancients, to be considerable; and there are few old trees in this country. One, still existing at Lee Court, in Kent, was celebrated in 1683 for its age and magnitude. Some of the largest trees in the neighbourhood of London are at Mount Grove, Hampstead, where they are between seventy and eighty feet in height; and in the grounds of Lambeth Palace, there is one ninety feet high, with a trunk of four and a half feet in diameter.

The Oriental Plane was held by the Greeks sacred to Helen; and the virgins of Sparta are represented by Theocritus as claiming homage for it, saying, "Reverence me! I am the tree of Helen." It was so admired by Xerxes, that Ælian and other authors inform us, he halted his prodigious army near one of them an entire day, during its march for the invasion of Greece; and, on leaving, covered it with gold, gems, necklaces, scarfs, and bracelets, and an infinity of riches. He likewise caused its figure to be stamped on a medal of gold, which he afterwards wore continually about him.

Among many remarkable Plane-trees recorded by Pliny, he mentions one in Lycia, which had a cave or hollow in the trunk that measured eighty-one feet in circumference. In this hollow were stone seats, covered with moss; and there, during the time of his consulship, Licinius Mutianus, with eighteen of his friends, was accustomed to dine and sup! Its branches spread to such an amazing extent, that this single tree appeared like a grove;

and this consul, says Pliny, chose rather to sleep in the hollow cavity of this tree, than to repose in his marble chamber, where his bed was richly wrought with curious needlework, and o'ercanopied with beaten gold. Pausanias, also, who lived about the middle of the second century, records a Plane-tree of remarkable size and beauty in Arcadia, which was then supposed to have been planted by the hands of Menelaus, the husband of Helen, which would make the age of the tree about thirteen hundred years.

At a later period magnificent examples of this umbrageous tree continued to flourish in Greece, and many of these are still existing. One of the most celebrated is at Buyukdère (or the Great Valley), about thirty miles from Constantinople, which M. de Candolle conjectured to be more than two thousand years old; when measured, in 1831, by Dr. Walsh, it was found to be one hundred and fifty-one feet in circumference at the base, and the diameter of its head covered a space of one hundred and thirty feet. Some doubt, however, seems to exist as to whether it should be considered as a single tree, or as a number of individuals which have sprung from a decayed stock, and become united at the base. The hollow contained within the stem of this enormous tree, we are told, affords a magnificent tent to the Seraskier and his officers, when the Turks encamp in this valley.

Among the Turks, the Planes are preserved with a devoted and religious tenderness.

THE OCCIDENTAL OR AMERICAN PLANE.

[*Platanus occidentalis.* Nat. Ord.—*Platanaceæ;* Linn.—*Monœ. Polya.*]

The American or Western Plane is found over an immense area in North America, comprising the Atlantic and western states, and extending beyond the Mississippi. In the Atlantic states, this tree is commonly known by the name of button-wood; and sometimes, in Virginia, by that of water-beech, from its preferring moist localities, "where the

soil is loose, deep, and fertile." On the banks of the Ohio, and in the states of Kentucky and Tennessee, it is commonly called sycamore, and sometimes plane-tree. The button-tree is, however, the name by which this tree is most generally known in America.

The Western Plane was first introduced into England about 1630, and was afterwards so generally planted, in consequence of its easy propagation by cuttings and rapid growth, that it soon became more common than *P. orientalis*. This tree is now, however, rare in this country, from the greater number having been killed by a severe frost in May 1809, and by the severe winter of 1813-4.

The American Plane, in magnitude and general appearance, closely resembles the oriental plane. The one species, however, can always be distinguished from the other by the following characters:—In the Oriental Plane, the leaves are smaller and much more deeply lobed than in the Western tree, and the petioles of the leaves, which in the Oriental species are green, in the Ameriean tree are purplish-red; the fruit, or ball-shaped catkins, also, of the Western Plane, are considerably larger, and not so rough externally as those of the other. The bark is said to scale off in larger pieces, and the wood to be more curiously veined. In all other respects, the descriptive particulars of both trees are the same. According to Michang, the Western Plane is "the loftiest and largest tree of the United States." In 1802, he saw one growing on the banks of the Ohio, whose

girth at four feet from the ground, was 47 feet, or nearly 16 feet in diameter. This tree, which showed no symptoms of decay, but on the contrary exhibited a rich foliage and vigorous vegetation, began to ramify at about 20 feet from the ground, a stem of no mean length, but short in comparison to many large trees of this species that he met with, whose boles towered to a height of 60 or 70 feet without a single branch. Even in England, specimens of the Western Plane, of no great age, are to be met with 100 feet in height. The rate of growth of *P. occidentalis*, when placed near water, is so rapid, that in ten years it will attain the height of forty feet; and a tree in the Palace Garden at Lambeth, near a pond, in twenty years had attained the height of eighty feet, with a trunk eight feet in circumference at three feet from the ground, and the diameter of the head forty-eight feet. This was in 1817.—(See Neill's *Hort. Tour*, p. 9.)

As a picturesque tree, Gilpin places the Occidental Plane after the oak, the ash, the elm, the beech, and the hornbeam, which he considers as deciduous trees of the first rank; saying of both species of Platanus, that, though neither so beautiful nor so characteristic as the first-named trees, they are yet worth the notice of the eye of the admirer of the picturesque.

"The Occidental Plane has a very picturesque stem. It is smooth, and of a light ash colour, and has the property of throwing off its bark in scales; thus naturally cleansing itself, at least its larger

boughs, from moss, and other parasitical encumbrances. This would be no recommendation of it in a picturesque light, if the removal of these encumbrances did not substitute as great a beauty in their room. These scales are very irregular, falling off sometimes in one part, and sometimes in another;

Leaves and Flowers of *P. occidentalis.*

and, as the under bark is, immediately after its excoriation, of a lighter hue than the upper, it offers to the pencil those smart touches which have so much effect in painting. These flakes, however, would be more beautiful if they fell off in a circular form, instead of a perpendicular one: they would correspond and unite better with the round form of the bole. "No tree forms a more pleasing shade than the Occidental Plane. It is full-leafed, and its leaf is large, smooth, of a fine texture, and seldom injured by insects. Its lower branches shooting horizontally, soon take a direction to the ground, and the spray seems more sedulous than that of any tree we have, by twisting about in various forms, to fill up every little vacuity with shade. At the same time, it must be owned that the twisting of its branches is a disadvantage to this tree, as it is to the beech. When it is stripped of its leaves, and reduced to a skeleton, it has not the natural appearance which the spray of the oak, and that of many other trees, discovers in winter; nor, indeed, does its foliage, from the largeness of the leaf and the mode of its growth, make the most picturesque appearance in summer. One of the finest Occidental Planes I am acquainted with stands in my own garden at Vicar's Hill; where its boughs, feathering to the ground, form a canopy of above fifty feet in diameter."

The Occidental Plane is propagated by cuttings, which will hardly fail to succeed if they are taken from strong young wood, and are planted early in the autumn in a moist good mould.

THE POPLAR TREE.

[*Populus.** Nat. Ord.—*Amentiferæ;* Linn.—*Diœc. Octa.*]

THE Poplars are deciduous trees, mostly growing to a large size; natives of Europe, North America, some parts of Asia, and the north of Africa. They are all of rapid growth, some of them extremely so;

* *Generic characters.* Flowers of both kinds in cylindrical catkins. *Barren* flowers consisting of numerous stamens, arising out of a small, oblique, cup-like perianth. *Fertile* flowers consisting of 4 or 8 stigmas, arising out of a cup-like perianth; *fruit* a follicle, 2-valved, almost 2-celled by the rolling in of the margins of the valves.

and they are all remarkable for a tremulous motion in their leaves, when agitated by the least breath of wind. The species delight in a rich, moist soil, in the neighbourhood of running water, but they do not thrive in marshes or soils saturated with stagnant moisture. Their wood is light, of a white or pale yellowish colour, very durable when kept dry, not liable to warp or twist when sawn up, and yields, from its elasticity, without splitting or cracking when struck with violence ; that of some species is also very slow in taking fire, and burns, when ignited, in a smouldering manner, without flame, on which account it is valuable, and extensively used for the flooring of manufactories and other buildings. Of the fifteen species of Poplar described in Loudon's *Arboretum*, three are believed to be natives of this country—*P. canescens*, *P. tremula*, and *P. nigra*.

P. canescens, the Gray or Common White Poplar, and its different varieties, form trees of from eighty to one hundred feet high and upwards, with silvery smooth bark, upright and compact branches, and a clear trunk, to a considerable height, and a spreading head, usually in full-grown trees, but thinly clothed with foliage. The leaves are roundish, deeply waved, lobed, and toothed; downy beneath, chiefly grayish; leaves of young shoots cordate-ovate, undivided: fertile catkins cylindrical. Stigmas 8.

The White Poplar is commonly propagated by layers, which ought to be transplanted into nursery lines for at least one year before removal to their final situation. The tree is admirably adapted for

thickening or filling up blanks in woods and plantations; and, for this purpose, truncheons may be planted from three to four inches in diameter, and from ten to twelve feet high. These truncheons have the great advantage of not being overshadowed by the adjoining trees, which is almost always the

Leaves, Flowers, and Catkins of *P. canescens*.

case when young plants are used for filling up vacancies among old trees. In a moderately good and moist soil, the White Poplar will attain in ten years, the height of thirty feet or upwards, with a trunk from six to nine inches in diameter.

As an ornamental tree, the White Poplar is not unworthy of a place in extensive parks and grounds, particularly when planted in lone situations, or near to water; it ought, however, to be grouped and massed with trees of equally rapid growth, else it soon becomes disproportionate, and out of keeping with those whose progress is comparatively slow. It is well adapted in our climate for a wayside tree, as it has no side branches to prevent the admission of light and free circulation of air; and also to form avenues, when an effect is wished to be produced in the shortest possible time.

The Aspen or Trembling Poplar, *P. tremula*, is inferior to few of its tribe, presenting the appearance of a tall, and, in proportion to its height, rather a slender tree, with a clean straight trunk; the head ample, and formed of horizontal growing branches, not crowded together, which assume, towards the extremities, a drooping or pendulous direction. The leaves are nearly orbicular, sinuate, or toothed, smooth on both sides; foot-stalks compressed; young branches hairy; stigmas 4, crested and eared at the base. The foliage is of a fine rich green; and the upper surface of the leaves being somewhat darker than the under, a sparkling and peculiar effect is produced by the almost constant tremulous motion with which they are affected by

the slightest breath of air, and which is produced by the peculiar form of the foot-stalks, which in this species is flattened, or vertically compressed in relation to the plane of the leaf, causing a quivering or double lateral motion, instead of the usual waving motion, where the foot-stalk is round, or else compressed horizontally.

The Black Poplar, *P. nigra*, is a tree of the largest size, with an ample head, composed of numerous branches and terminal shoots. The bark is ash-coloured, and becomes rough and deeply furrowed with age. The catkins are bipartite, cylindrical; the barren appear in March or April, long before the expansion of the leaves, and, being large and of a deep red colour, produce a rich effect at that early period of the year. The capsules or seed-vessels of the fertile catkin are round, and contain a pure white cottony down, in which the seeds are enveloped. The leaves appear about the middle of May, and, when they first expand, their colour is a mixture of red and yellow; afterwards they are of a pale light green, with yellowish foot-stalks; remarkably triangular, acuminate, serrate, smooth on both sides; stigmas 4.

There is a Black Poplar at Alloa House, in Clackmannanshire, which, in 1782, at the height of between three and four feet from the ground, measured thirteen feet and a half in circumference. There is also a very graceful and beautiful tree of the same species at Bury St. Edmunds, ninety feet in height, and which measures, at the distance of three feet from the ground, fifteen feet in girth.

The trunk rises forty-five feet before it divides, when it throws out a vast profusion of branches.

The Poplar was dedicated by the Romans to Hercules, in honour of his having destroyed the monster Cacus in a cavern near to the Aventine Mount, where the Poplar formerly flourished in abundance. In Pitt's translation of Virgil, the following reference is made to the rite of crowning with the Poplar:—

> From that blest hour th' Arcadian tribe bestowed
> Those solemn honours on their guardian god.
> Potitius first, his gratitude to prove,
> Adored Alcides* in the shady grove;
> And with the old Pinarian sacred line
> These altars raised, and paid the rites divine,—
> Rites, which our sons for ever shall maintain;
> And ever sacred shall the grove remain.
> Come, then, with us to great Alcides pray,
> And crown your heads, and solemnize the day.
> Invoke our common god with hymns divine,
> And from the goblet pour the generous wine.
> He said, and with the Poplar's sacred boughs,
> Like great Alcides, binds his hoary brows.

* The Greek name of Hercules.

THE SCOTCH FIR, OR PINE.

[*Pinus* sylvestris.* Nat. Ord.—*Coniferæ;* Linn.—*Monœc. Mon.*]

THE Scotch Fir or Pine, and its varieties, are indigenous throughout the greater part of Europe. It also extends into the north, east, and west of Asia; and is found at Nootka Sound in Vancouver's Island, on the north-west coast of North America.

* *Generic characters.* Flowers monoecious. Cones woody, with numerous 2-seeded scales, thickened and angular at the end. Seeds with a crustaceous coat, winged. Leaves acerose, in clusters of from 2 to 5, surrounded by scarious scales at the base.

In the south of Europe it grows at an elevation of from 1000 to 1500 feet; in the Highlands of Scotland, at 2700 feet; and in Norway and Lapland, at 700 feet. Widely dispersed, however, as the species is throughout the mountainous regions of Europe, it is only found in profusion between 52° and 65° N. lat. It occurs in immense forests in Poland and Russia, as well as in northern Germany, Sweden, Norway, and Lapland, up to the 70° of N. lat. The indigenous forests of Scotland, which formerly occupied so large a portion of its surface, have been greatly reduced within the last sixty years, chiefly on account of the pecuniary embarrassments of their proprietors.

The Scotch Fir, in favourable situations, attains the height of from eighty to one hundred feet, with a trunk from two to four feet in diameter, and a head somewhat conical or rounded, but generally narrow in proportion to its height, as compared with the heads of other broad-leafed trees. The bark is of a reddish tinge, comparatively smooth, scaling off in some varieties, and rough and furrowed in others. The branches are disposed in whorls from two to four together, and sometimes five or six; they are at first slightly turned upwards, but finally become somewhat pendant, with the exception of those branches which form the summit of the tree. The leaves are in sheaths, spirally disposed on the branches; they are distinguished at first sight from all other pines in which the leaves are in pairs, by being much more glaucous, more especially when in a young state, and

straighter. The general length of the leaves, in vigorous young trees, is from two to three inches; but in old trees they are much shorter; they are smooth on both surfaces, stiff, obtuse at the extremities, with a small point, and minutely serrated;

Foliage, Flowers, Cones; Cone opened, showing the Seeds.

dark green on the upper side, and glaucous and striated on the under side. The leaves remain green on the tree during four years, and generally drop off at the commencement of the fifth year. Long before this time, generally at the beginning of the second year, they have entirely lost their light glaucous hue, and have become of the dark sombre appearance which is characteristic of this tree at every season except that of summer, when the young glaucous shoots of the year give it a lighter hue. The flowers appear commonly in May and June. The barren flowers are from half an inch to upwards of an inch long, are placed in whorls at the base of the young shoots of the current year, and contain two or more stamens with large yellow anthers, which discharge a sulphur-coloured pollen in great abundance. The fertile flowers, or embryo cones, appear on the summits of the shoots of the current year, generally two on the point of a shoot, but sometimes from four to six. The colour of these embryo cones is generally purple and green; but they are sometimes yellowish or red. It requires eighteen months to mature the cones; and in a state of nature it is two years before the seeds are in a condition to germinate. The cone, which is stalked, and, when mature, begins to open at the narrow extremity, is perfectly conical while closed, rounded at the base, from one to two inches in length, and about an inch across in the broadest part; as it ripens, the colour changes from green to reddish brown. The scales of the cone are oblong, and terminate externally in a kind of depressed

pyramid, which varies in shape and height. At the base of each scale, and close to the axis of the cone, two oval-winged seeds or nuts are lodged. From these nuts the young plant appears in the shape of a slender stem, with from five to six linear leaves or cotyledons. In ten years, in the climate of London, plants will attain the height of from twenty-five to thirty feet; and in twenty years, from forty to fifty feet.

The great contempt in which the Scotch Fir is commonly held, says Gilpin, "arises, I believe, from two causes—its dark murky hue is unpleasing, and we rarely see it in a picturesque state. In perfection it is a very picturesque tree, though we have little idea of its beauty. It is a hardy plant, and is therefore put to every servile office. If you wish to screen your house from the south-west wind, plant Scotch Firs; and plant them close and thick. If you want to shelter a nursery of young trees, plant Scotch Firs; and the phrase is, you may afterwards weed them out as you please. I admire its foliage, both for the colour of the leaf, and its mode of growth. Its ramification, too, is irregular and beautiful, and not unlike that of the stone pine; which it resembles also in the easy sweep of its stem, and likewise in the colour of the bark, which is commonly, as it attains age, of a rich reddish brown. The Scotch Fir, indeed, in its stripling state, is less an object of beauty. Its pointed and spiry shoots, during the first years of its growth, are formal; and yet I have sometimes seen a good contrast produced between its spiry

points and the round-headed oaks and elms in its neighbourhood. When I speak, however, of the Scotch Fir as a beautiful individual, I conceive it when it has outgrown all the improprieties of its youth; when it has completed its full age, and when, like Ezekiel's cedar, it has formed its head high among the thick branches. I may be singular in my attachment to the Scotch Fir. I know it has many enemies; but my opinion will weigh only with the reasons I have given." Sir Thomas Dick Lauder, in his commentary on this passage, says, "We agree with Gilpin to the fullest extent in his approbation of the Scotch Fir as a picturesque tree. We, for our part, confess, that we have seen it towering in full majesty, in the midst of some appropriate Highland scene, and sending its limbs abroad with all the unconstrained freedom of a hardy mountaineer, as if it claimed dominion over the savage regions around it; we have then looked upon it as a very sublime object. People who have not seen it in its native climate and soil, and who judge of it from the wretched abortions which are swaddled and suffocated in English plantations, in deep, heavy, and eternally wet clays, may well call it a wretched tree; but, when its foot is among its own Highland heather, and when it stands freely on its native knoll of dry gravel, or thinly covered rock, over which its roots wander afar in the wildest reticulation, whilst its tall, furrowed, and often gracefully sweeping red and gray trunk, of enormous circumference, rears aloft its high umbrageous canopy, then would the greatest sceptic on this

point be compelled to prostrate his mind before it with a veneration which, perhaps, was never before excited in him by any other tree."

Some of the most picturesque trees of this kind, perhaps, in England, adorn Mr. Lenthall's mansion, of Basilsleigh, in Berkshire. The soil is a deep rich sand, which seems to be well adapted to them. As they are here at perfect liberty, they not only become large and noble trees, but they expand themselves likewise in all the careless forms of nature.

There is a remarkably fine specimen of the Scotch Fir at Castle Huntly, in Perthshire. In 1796, it measured thirteen feet six inches in girth, at three feet from the ground; and close to the ground, it measured nineteen feet, and is thought not unlikely to be the largest planted Fir in the country. The word *planted* is very properly used here, as many examples of larger *natural* Firs have been produced. Professor Walker observes, that few Fir-trees were planted before the beginning of the present century; and that as the Fir is a tree which, from the number of rings found in it, will probably grow four hundred years, it is impossible that the planted Firs can have arrived at perfection. "This," says Sir T. Lauder, "may be all true; but as the reasoning proceeds upon the fact of a natural Swedish tree, perfectly sound, having three hundred and sixty circles in it, it by no means follows that a planted Fir will not rot in a premature state of disease, and die before it has sixty circles."

The acerose or needle leaf of the Pine seems necessary to protect the tree from injury; for if their leaves were of a broader form, the branches would be borne down, in winter, by the weight of snow in the northern latitudes, and they would be more liable to be uprooted by the mighty hurricane. It is, however, enabled thus to evade both; as the snow falls through, and the winds penetrate between, the interstices of its filiform leaf. Struggling through the branches, the wind comes in contact with such an innumerable quantity of points and edges, as, even when gentle, to produce a deep murmur, or sighing; but when the breeze is strong, or the storm is raging abroad, it produces sounds like the murmuring of the ocean, or the beating of the surge and billows among the rocks:—

> The loud wind through the forest wakes
> With sounds like ocean roaring, wild and deep,
> And in yon gloomy Pines strange music makes,
> Like symphonies unearthly heard in sleep;
> The sobbing waters wash their waves and weep:
> Where moans the blast its dreary path along,
> The bending Firs a mournful cadence keep,
> And mountain rocks re-echo to the song,
> As fitful raves the wind the hills and woods among.
>
> DRUMMOND.

Wordsworth, also, thus speaks of Pine-trees moved by a gentle breeze:—

> An idle voice the Sabbath region fills
> Of deep that calls to deep across the hills,
> Broke only by the melancholy sound
> Of drowsy bells for ever tinkling round;
> Faint wail of eagle melting into blue
> Beneath the cliffs, and Pine-wood's steady sugh.

The quality of the timber of the Scotch Fir, according to some, is altogether dependent on soil, climate, and slowness of growth; but, according to others, it depends jointly on these circumstances, and on the kind of variety cultivated. It is acknowledged that the timber of the Scotch Fir, grown on rocky surfaces, or where the soil is dry and sandy, is generally more resinous and redder in colour, than that of such as grow on soils of a clayey nature, boggy, or on chalk. At what time the sap wood is transformed into durable or red wood, has not yet been determined by vegetable physiologists. The durability of the red timber of this tree was supposed by Brindley, the celebrated engineer, to be as great as that of the oak; and some of it, grown in the north Highlands, is reported to have been as fresh and full of resin after having been three hundred years in the roof of an old castle, as newly-imported timber from Memel.

The red wood timber of the Scottish forests, similar, in every respect, to the best Baltic Pine, is the produce of trees that have numbered from one to two or more centuries. In Norway, it is not considered full-grown timber till it has reached from one hundred and thirty to two hundred years. It seems, then, rather preposterous, that any one should expect that plantation Fir timber, cut down when, perhaps, not more than thirty years old, and consisting entirely of sap wood, should be adapted to all those purposes which require the best full-grown and matured timber; and yet such seems very generally to have been the case, and to the

disappointment at not finding those expectations realized, may be attributed a large portion of that prejudice and dislike so generally entertained towards this tree.

On Hampstead Heath, near London, there are a number of Pines which are said to have been raised from seed brought from Ravenna. If so, the cones are very different from those of the Ravenna Pine described by Leigh Hunt:—

> Various the trees and passing foliage there,—
> Wild pear, and oak, and dusky juniper,
> With bryony between in trails of white,
> And ivy, and the suckle's streaky light,
> And moss warm gleaming with a sudden mark,
> Like flings of sunshine left upon the bark;
> And still the Pine long-haired, and dark, and tall,
> In lordly right, predominant o'er all.
>
> Much they admire that old religious tree,
> With shaft above the rest up-shooting free,
> And shaking, when its dark locks feel the wind,
> Its wealthy fruit with rough Mosaic rind.

THE SILVER FIR.

[*Abies* picea.* Nat. Ord—*Coniferæ;* Linn.—*Monœc. Mon.*]

The Silver Fir is indigenous to the mountains of Central Europe, and to the west and north of Asia, rising to the commencement of the zone of the Scotch fir. It is found in France, on the Pyrenees, the Alps, and the Vosges; in Italy, Spain, Greece, and the south of Germany; also in Russia and Siberia; but it is not found indigenous in Britain or Ireland. On the Carpathian mountains it is

* For the generic characters, see p. 221.

found to the height of 3200 feet; and on the Alps, to the height of from 3000 to 4000 feet. Wherever it is found of a large size, as in the neighbourhood of Strasburg, and in the Vosges, where it has attained the height of one hundred and fifty feet, it invariably grows in good soil, and in a situation sheltered rather than exposed. It appears to have been introduced into England about the commencement of the seventeenth century; as we learn from Evelyn, that in 1663 there were two Silver Firs growing at Harefield, Middlesex, which were there planted sixty years before, at two years' growth from the seed, the larger of which had risen to the height of 81 feet, and was 13 feet in girth below; and it was calculated that it contained 146 feet of good timber.

In full-grown trees, the trunk of the Silver Fir is from six to eight feet in diameter, covered, till its fortieth or fiftieth year, with a whitish-gray bark, tolerably smooth; but, as it increases in age, it becomes cracked and chapped. At a still greater age, the bark begins to scale off in large pieces, leaving the trunk of a dark brown colour beneath. The branches stand out horizontally, as do the branchlets and spray, with reference to the main stem of the branch. The leaves on young trees are distinctly two-rowed, and the general surface of the rows is flat; but, as the tree advances in age, and especially on cone-bearing shoots, the disposition of the leaves is less perfect. In every stage of growth they are turned up at the points; but more especially so on old

trees, and on cone-bearing branches. The leaves are shorter and broader, and are set much thicker on the spray, than those of other firs and pines. The upper surface of the leaves is also of a darker and brighter green, while underneath they have

Foliage and Cones of *A. picea*, or *Picea*.

two white silvery lines running lengthwise on each side of the midrib, which make a conspicuous appearance on the partially turned up leaves; whence its name. The cones of the Silver Fir are large and cylindrical, being from six to eight inches long, erect, and bluntly pointed at both ends. When young they are green, but, as they advance to maturity, the scales acquire a rich purplish colour, and when quite ripe are deep brown; they remain upwards of a year upon the tree, as they first appear in May, when they blossom, and do not ripen the seed till October of the following year. The scales are large, with a long dorsal bract, and fall from the axillar spindle of the cone in the spring of the second year. The seeds are irregular and angular, with a large membranaceous wing. Cones with fertile seeds are seldom produced before the tree has attained its fortieth year; though without, seeds often appear before half that period has elapsed.

Gilpin remarks that "the Silver Fir has very little to boast in point of picturesque beauty. It has all the regularity of the spruce, but without its floating foliage. There is a sort of harsh, stiff, unbending formality in the stem, the branches, and the whole economy of the tree, which makes it disagreeable. We rarely see it, even in its happiest state, assume a picturesque shape." In this opinion Sir T. D. Lauder does not entirely coincide, for, in his remarks upon Gilpin's text, he says, "As to the picturesque effect of this tree, we have seen many of them throw out branches from

near the very root, that twined and swept away from them in so bold a manner, as to give them, in a very great degree, that character which is most capable of engaging the interest of the artist."

The rate of growth of the Silver Fir is slow when young, but rapid after it has attained the age of ten or twelve years. In England, under advantageous circumstances, it attains a magnificent size, some recorded trees being from 100 to 130 feet in height, with trunks varying in diameter from three to six feet, and containing from two hundred to upwards of three hundred feet of timber. In Scotland, also, it has reached dimensions equally great. At Roseneath Castle, Argyleshire, there are two Silver Firs which Sir T. D. Lauder considered the finest specimens he had ever seen. When measured in 1817, he says, "the circumference of one of them, at five feet from the ground, was fifteen feet nine inches; at three feet from the ground, it was seventeen feet six inches; and just above the roots, it was nineteen feet eight inches. The second tree was sixteen feet two inches in girth at five feet from the ground; seventeen feet eleven inches at three feet from the ground; and nineteen feet ten inches when measured immediately above the roots." The Silver Fir likewise grows to a large size in Ireland, much more rapidly than any other tree. Some planted in a wet clay, on a rock, have measured twelve feet in girth at the base, and seven feet six inches at five feet high, after a growth of forty years.

THE NORWAY SPRUCE FIR.

[*Abies* excelsa.* Nat. Ord.—*Coniferæ;* Linn.—*Monœc. Mon.*]

THOUGH a native of the mountains of Europe and Asia in similar parallels of latitude, the Spruce Fir is not considered indigenous to Britain. It must, however, have been introduced at an early period, as it is mentioned by our oldest writers on arboriculture. It is most common in Lapland, Norway, Sweden, Denmark, and throughout the

* *Generic characters.* Flowers monoecious. *Barren* catkins crowded, racemose. Scales of the cone thinned away to the edge, and usually membranous or coriaceous. *Leaves* never fascicled.

north of Germany. It grows in the south of Norway at an elevation of 3000 feet above the level of the sea, and in the north on mountains in 70° N. lat. at 750 feet. In the valleys of the Swiss Alps, the Spruce is frequently found above one hundred and fifty feet in height, with trunks from four to five feet in diameter. This tree requires a soft moist soil. Among dry rocks and stones, where the Scotch fir would flourish, the Spruce Fir will scarcely grow.

The Norway Spruce Fir is the loftiest of European trees, attaining, in favourable situations, the enormous height of one hundred and eighty feet; with a very straight upright trunk, from two to six feet in diameter, and widely extending branches, which spread out regularly on every side, so as to form a cone-like or pyramidal shape, terminating in a straight arrow-like leading shoot. In young trees, the branches are disposed in regular whorls from the base to the summit; but in old trees the lower branches drop off. The trunk is covered with a thin bark, of a reddish colour and scaly surface, with occasional warts or small excrescences distributed over its surface. The leaves are solitary, of a dark grassy green, generally under one inch in length, straight, stiff, and sharp-pointed, disposed around the shoots, and more crowded together laterally than on the upper and under sides of the branchlets. The barren flowers, about one inch long, are cylindrical, on long catkins, curved, of a yellowish colour, with red tips, and discharging, when expanded, a profusion of

yellow pollen. The fertile flowers are produced at the ends of the branches, first appearing as small pointed purplish red catkins; they afterwards gradually assume the cone-like form, and become pendant, changing first into a green and latterly into a reddish brown, acquiring a length of from five to seven inches, and a breadth of above two inches. The scales are rhomboidal, slightly incurved, and rugged or toothed at the tip, with two seeds in each scale. The seeds, which are very small, and furnished with large membranous wings, are not shed till the spring of the second year.

As an ornamental tree, all admirers of regularity and symmetry are generally partial to the Spruce. Gilpin was, however, no great admirer of the tree; but still he allows it to have had its peculiar beauties. "The Spruce Fir," he says, "is generally esteemed a more elegant tree than the Scotch pine; and the reason, I suppose, is because it often feathers to the ground, and grows in a more exact and regular shape: but this is a principal objection to it. It often wants both form and beauty. We admire its floating foliage, in which it sometimes exceeds all other trees; but it is rather disagreeable to see a repetition of these feathery strata, beautiful as they are, reared tier above tier, in regular order, from the bottom of a tree to the top. Its perpendicular stem, also, which has seldom any lineal variety, makes the appearance of the tree still more formal. It is not always, however, that the Spruce Fir grows with so much regularity. Sometimes a lateral

branch, here and there taking the lead beyond the rest, breaks somewhat through the order commonly observed, and forms a few chasms, which have a good effect. When this is the case, the Spruce Fir ranks among picturesque trees. Sometimes it

Foliage and Cones of *A. excelsa*.

has as good an effect, and in many circumstances a better, when the contrast appears still stronger; when the tree is shattered by some accident, has lost many of its branches, and is scathed and ragged. A feathery branch, here and there, among broken stems, has often an admirable effect; but it must arise from some particular situation. In all circumstances, however, the Spruce Fir appears best either as a single tree, or unmixed with any of its fellows; for neither it, nor any of the spear-headed race, will ever form a beautiful clump without the assistance of other trees."

The Spruce Fir is raised from seed, which should be chosen from healthy vigorous trees. The young plant appears with from seven to nine cotyledons, but makes little progress till after the third year, when it begins to put out lateral branches. Its progress from this time, till its fifth or sixth year, is at the annual rate of about six inches, after which age its annual growth, in favourable soils, is very rapid, the leading shoot being frequently from two to three feet in length, and this increase it continues to support with undiminished vigour for forty or fifty years, many trees within that period attaining a height of from sixty to eighty feet. Its growth after this period is slower, and the duration of the tree, in its native habitats, is considered to range between one hundred and one hundred and fifty years.

THE SYCAMORE, OR GREATER MAPLE.

[*Acer* pseudo-platanus.* Nat. Ord.—*Aceraceæ;* Linn.—*Polyg. Monœc.*]

Turner, who wrote in 1551, considered the Sycamore as a stranger, or tree that had been introduced. On the Continent it is spread over the mountains of middle Europe; and is found in Switzerland, where it particularly abounds, growing at an elevation of from 2000 to 3000 feet above the level of the sea, where the soil is dry and of a good quality.

The Sycamore is "certainly a noble tree," vieing,

* For the generic characters, see p. 139.

in point of magnitude, with the oak, the ash, and other trees of the first rank. It presents a grand unbroken mass of foliage, contrasting well, in appropriate situations, with trees of a lighter and more airy character. It has round spreading branches, and a smooth ash-coloured bark, frequently broken into patches of different hues, by peeling off in large flakes, like the planes. The leaves have long foot-stalks, are four or five inches broad, palmate, with five acute, unequally serrated lobes; the middle one largest, pale or shining beneath. The flowers are green, the size of a currant blossom, disposed into axillary, pendulous, compound clusters; stamens of the barren flower twice as long as the corolla. Ovary downy, with broad-spreading wings. Selby observes that "from the strength of its spray, and the nature of its growth, which is stiff and angular, the Sycamore is especially calculated to act as a shelter or break-wind in exposed situations, whether it be upon the coast where it braves the cutting eastern blasts, or upon bleak and elevated tracts, subject to long continued and powerful winds; for even in such localities, provided the soil be dry, and of tolerable quality, it attains a respectable size, and shows an upright form, unconquered by the blast. It is, probably, for these peculiar and enduring qualities that we see it so frequently in the north of England and in Scotland planted by itself, or sometimes in company with the ash, around farm houses and cottages, in high and exposed situations." This custom is evidently alluded to by the Westmoreland

poet, in his description of the landscape on the banks of the Wye :—

> Once again
> Do I behold these steep and lofty cliffs,
> That on a wild secluded scene impress
> Thoughts of more deep seclusion; and connect

Leaves, Bunch of Flowers, and Samaræ of *A. pseudo-platanus*.

The landscape with the quiet of the sky.
The day is come when I again repose
Here, under the dark Sycamore, and view
These plots of cottage-ground, these orchard tufts,
Which at this season, with their unripe fruits,
Are clad in one green hue, and lose themselves
Among the woods and copses, nor disturb
The wild green landscape. Once again I see
These hedge-rows, hardly hedge-rows, little lines
Of sportive wood run wild: these pastoral farms
Green to the very door; and wreaths of smoke,
Sent up, in silence, from among the trees!
With some uncertain notice, as might seem
Of vagrant dwellers in the houseless woods,
Or of some hermit's cave, where by his fire
The hermit sits alone.
These beauteous forms,
Through a long absence, have not been to me
As is a landscape to a blind man's eye:
But oft, in lonely rooms, and 'mid the din
Of towns and cities, I have owed to them,
In hours of weariness, sensations sweet,
Felt in the blood, and felt along the heart;
And passing even into my purer mind,
With tranquil restoration:—feelings, too,
Of unremembered pleasure: such, perhaps,
As have no slight or trivial influence
On that best portion of a good man's life,
His little, nameless, unremembered acts
Of kindness and of love. Nor less, I trust,
To them I may have owed another gift,
Of aspect more sublime: that blessed mood,
In which the burthen of the mystery—
In which the heavy and the weary weight
Of all this unintelligible world
Is lightened:—that serene and blessed mood,
In which the affections gently lead us on,
Until the breath of this corporeal frame,
And even the motion of our human blood,
Almost suspended, we are laid asleep
In body, and become a living soul:
While with an eye made quiet by the power

Of harmony, and the deep power of joy,
We see into the life of things.
If this
Be but a vain belief, yet, O! how oft,
In darkness, and amid the many shapes
Of joyless daylight; when the fretful stir
Unprofitable, and the fever of the world,
Have hung upon the beatings of my heart,
How oft, in spirit, have I turned to thee,
O sylvan Wye! Thou wanderer thro' the woods,
How often has my spirit turned to thee!

WORDSWORTH.

The Sycamore is not unfrequently planted in streets and before houses, on account of its spreading branches and thick shade, for which it bears a high reputation. Of this tree Sir T. D. Lauder says, "the spring tints are rich, tender, glowing, and harmonious. In summer, its deep green hue accords well with its grand and massy form; and the browns and dingy reds of its autumnal tints harmonize well with the other colours of the mixed grove, to which they give a depth of tone. It is a favourite Scotch tree, having been much planted about old aristocratic residences in Scotland."

The Sycamore, in the language of flowers, signifies curiosity, because it was supposed to be the "tree on which Zaccheus climbed to see Christ pass on his way to Jerusalem, when the people strewed leaves and branches of palm and other trees in his way, exclaiming, 'Hosanna to the Son of David!' The tree which is frequently called the Sycamore in the Bible, was not the species under description, *A. pseudo-platanus*, but a species of fig, *Ficus sycomorus*, a native of Egypt, where

it is a timber-tree exceeding the middle size, and bearing edible fruit."

The common Sycamore is generally propagated by seed; and its varieties by layers, or by budding or grafting. It will also propagate freely by cuttings of the roots. It is a tree of rapid growth, frequently attaining a diameter of from four to five inches in twenty years. It arrives at its full growth in fifty or sixty years; but it requires to be eighty or one hundred years old before its wood arrives at perfection. It produces fertile seeds at the age of twenty years, but flowers several years sooner. The longevity of the tree is from one hundred and forty to two hundred years, though it has been known of a much greater age. There are many fine Sycamores in different parts of the kingdom; the largest of which, one at Bishopton in Renfrewshire, is sixty feet in height and twenty feet in girth. This tree is known to have been planted before the Reformation, and is therefore more than three hundred years old, yet it has the appearance of being perfectly sound.

THE COMMON WALNUT TREE.

[*Juglans* regia.* Nat. Ord.—*Juglandaceæ;* Linn.—*Monœc. Polya.*]

THE Walnut tree is a native of Persia, and is found growing wild in the North of China. It was known to the Greeks and Romans, and was probably introduced into this country by the latter. It is now to be met with in every part of Europe, as far north as Warsaw; but it is nowhere so far naturalized as to produce itself spontaneously from seed. It

* *Generic characters. Flowers* monœcious. *Stamens* 18 to 24. *Drupe* with a 2-valved deciduous sarcocarp, or rind; and a deeply-wrinkled putamen or shell.

ripens its fruit, in fine seasons, in the neighbourhood of Edinburgh, as a standard; and it lives against a wall as far north as Dunrobin Castle, in Sutherlandshire.

The Walnut forms a large and lofty tree, with strong spreading branches, attaining even in this country to the height of ninety feet. The leaves have three or four pairs of oval leaflets, terminated by an odd one, which is longer than the rest. The barren catkins are pendulous, and are produced near the points of the shoots. The bark is thick and deeply furrowed on the trunk; but on the upper branches it is gray and smooth. The fruit is green and oval; and, in the wild species, contains a small hard nut. In the most esteemed cultivated varieties, the fruit is of a roundish oval, and is strongly odoriferous; nearly two inches long, and one and a half broad. The nut occupies two-thirds of the volume of the fruit. Towards autumn the husk softens, and, decaying from about the nut, allows it to fall out.

The nuts are used in different ways, and at various stages of their growth; when young and green, and before the shells become indurated, they make an excellent and well-known pickle, as well as a savoury kind of ketchup, and a liqueur is also made from them in this state. Previous to their becoming fully ripe, and while the kernel is yet soft, they are eaten in France with a seasoning of salt, pepper, vinegar, and shallots. When fully ripe, they are both wholesome and easy of digestion, so long as they remain fresh, and part freely from

the pellicle, or skin, which envelopes the kernel. An oil is expressed from the nuts, which is of great service to the artist in whites, and other colours, and also for gold size and varnish.

When Walnuts are plentiful, it has been observed

Leaves, Catkins, and Nuts of *J. regia*.

that there is also a plentiful harvest. Virgil mentions this observation in the first of his *Georgics*, which is thus translated by Martyn:—"Observe also when the Walnut tree shall put on its bloom plentifully in the woods, and bend down its strong, swelling branches: if it abounds in fruit, you will have a like quantity of corn, and a great threshing with much heat. But if it abounds with a luxuriant shade of leaves, in vain shall your floor thresh the corn, which abounds with nothing but chaff."

The Walnut is far from being an unpicturesque tree, and planted at some distance from each other they form shady and graceful avenues, and prosper well in hedgerows. The Bergstras (which extends from Heidelberg to Darmstadt) is planted entirely with this tree; for by an ancient law, the Borderers were compelled to plant and train them up, chiefly on account of their ornament and shade, so that a man might ride for miles about that country, under a continued arbour or close walk—the traveller as well refreshed by its fruit as by its shade. Amid other trees whose foliage may be of a vivid green, its warm, russet-hued leaves present a pleasing variety about the end of May; and in summer that variety is still preserved by the contrast of its yellowish hues with the darker tints of other trees. It puts forth its leaves at such an advanced period of the year, and sheds them so early, that it is never long in harmony with the grove. It, therefore, stands best alone, as the premature loss of its foliage is then of less consequence.

The Walnut tree is found abundantly in Burgundy, where it stands in the midst of their corn fields, at distances of sixty and a hundred feet, and is said to be a preserver of the crops by keeping the ground warm. Whenever a tree is felled, which is only when old and decayed, a young one is planted near it; and in Evelyn's time, between Hanau and Frankfort, in Germany, no young farmer was permitted to marry a wife, until he had brought proof that he had planted a stated number of these trees. M. Sorbiere mentions the Dutch plantations of Walnut trees in terms of praise, remarking, that even in the very roads and common highways, they are better preserved and maintained than those about the houses and gardens belonging to the nobility and gentry of most other countries.

The Walnut was formerly in great request as a timber tree; its place is generally now supplied by foreign woods, which excel that of our own growth. It was much used by cabinet-makers for bedsteads, and bureaus, for which purposes it is one of the most durable woods of English growth. It is also used for gun-stocks. Near the root of the tree the wood is finely veined—suitable for inlaying and other ornamental works.

> The sweet-leafed Walnut's undulated grain,
> Polished with care, adds to the workman's art
> Its varying beauties.
>
> DODSLEY.

The Walnut is propagated by the nut; which is best sown where it is finally to remain, on account of the tap root, which will thus have its full influence on the vigour of the tree. The plant is some-

what tender when young, and apt to be injured by spring frosts: it, however, grows vigorously, and attains in the climate of London the height of twenty feet in ten years, beginning about that time to bear fruit.

The Walnut sometimes attains a prodigious size and a great age. Scamozzi, a celebrated Italian architect, who died in 1616, mentions his having seen at St. Nicholas, in Lorraine, a single plank of the wood of this tree twenty-five feet wide, upon which the Emperor Frederick III. had given a sumptuous feast

There is a remarkable specimen of this tree at Kinross House, in Kinross-shire, which measured nine feet six inches in girth, in September, 1796, and is supposed to have been planted about 1684. Sir T. Dick Lauder says it is probably the oldest Walnut tree in Scotland, and is evidently decaying, though whether from accident or age is uncertain.

Collinson tells us of another, in his *History of Somersetshire*, which he says grew in the Abbey Church-yard, on the north side of St. Joseph's Chapel. This was a miraculous Walnut tree, which never budded forth before the feast of St. Barnabas (that is, the 11th June), and on that very day shot forth leaves and flourished like its usual species. It is strange to say how much this tree was sought after by the credulous, and though not an uncommon Walnut, Queen Anne, King James, and many of the nobility, even when the times of monkish superstition had ceased, gave large sums of money for small cuttings from the original.

THE WEYMOUTH PINE.

[*Pinus* strobus.* Nat. Ord.—*Coniferæ;* Linn.—*Monœc. Monan.*]

This Pine is a native of North America, growing in fertile soils, on the sides of hills, from Canada to Virginia. It was introduced about 1705, and was soon after planted in great quantities at Longleat, in Wiltshire, the seat of Lord Weymouth, where the trees prospered amazingly, and whence the species received the name of the Weymouth Pine.

In America, in the state of Vermont, and near

* For the generic characters, see p. 207.

the commencement of the river St. Lawrence, this tree is found one hundred and eighty feet in height, with a straight trunk, from about four to seven feet in diameter. The trunk is generally free from branches for two-thirds or three-fourths of its height; the branches are short, and in whorls, or disposed in tiers one above another, nearly to the top, which consists of three or four upright branches, forming a small conical head. The bark, on young trees, is smooth, and even polished; but as the tree advances in age, it splits, and becomes rugged and gray, but does not fall off in scales like that of other Pines. The leaves are from three to four inches long, straight, upright, slender, soft, triquetrous, of a fine light bluish green, marked with silvery longitudinal channels; scabrous and inconspicuously serrated on the margin; spreading in summer, but in winter contracted, and lying close to the branches. The barren catkins are short, elliptic, racemose, pale purple, mixed with yellow, and turning red before they fall. The fertile catkins are ovate-cylindrical; erect, on short peduncles when young, but when full-grown pendulous, and from four to six inches long, slightly curved, and composed of thin smooth scales, rounded at the base, and partly covered with white resin, particularly on the tips of the scales; apex of the scales thick, and seeds oval, of a dull gray. The cones open to shed the seeds in October of the second year.

Gilpin is very severe upon this tree, and says that it has very little picturesque beauty to recom-

mend it. On the contrary, this tree seems to be a great addition to a landscape ; the meagreness of foliage, which Gilpin considers one of its principal defects, giving to it, in our opinion, an elegant

Foliage, Cones: Scale opened, with two winged Seeds of *P. strobus.*

appearance. He says that it is admired for its polished bark; but he adds, the painter's eye pays little attention to so trivial a circumstance, even when the tree is considered as a single object. Its stem rises with perpendicular exactness; it rarely varies, and its branches issue with equal formality from its sides. Opposed to the wildness of other trees, the regularity of the Weymouth Pine has sometimes its beauty. A few of its branches hanging from a mass of heavier foliage, may appear light and feathery, while its spiry head may often form an agreeable apex to a clump.

The Weymouth Pine is propagated from seed, which come up the first year, and may be treated like those of the Scotch fir. The rate of growth, except in good soil and in very favourable situations, is slower than that of most European Pines. Nevertheless, in the climate of London, it will attain the height of twelve feet in ten years from the seed. The wood is white or very palish yellow, of a fine grain, soft, light, free from knots, and easily wrought; it is also durable, and not very liable to split when exposed to the sun: but it has little strength, gives a feeble hold to nails, and sometimes swells from the humidity of the atmosphere; while, from the very great diminution of the trunk from the base to the summit, it is difficult to procure planks of any great length and uniform diameter. The largest Weymouth Pine in this country is at Kingston, in Somersetshire. In 1837 this tree was ninety-five feet in height, with a trunk of three feet in diameter.

THE WHITEBEAM TREE.

[*Pyrus aria.** Nat. Ord.—*Rosaceæ;* Linn.—*Icosa. Penta.*]

THE Whitebeam tree is a native of most parts of Europe, from Norway to the Mediterranean Sea; and also of Siberia and Western Asia. It is to be met with in every part of Britain, varying greatly in magnitude, according to soil and situation. It seems to prefer chalky soils, or limestone rocks;

* *Generic characters.* *Calyx* superior, monosepalous, 5-cleft. *Petals* 5. *Styles* 2 to 5. Fruit a *pome*, 5-celled, each cell 2-seeded, cartilaginous.

and also, according to Withering, loves dry hills and open exposures, and flourishes either on gravel or clay. The Whitebeam rises to the height of forty or fifty feet, with a straight, erect, smooth trunk, and numerous branches, which for the most part tend upwards, and form a round or oval head. The young shoots have a brown bark, covered with a mealy down. The leaves are between two and three inches long, and one and a half broad in the middle, oval, light green above, and very white and downy beneath. The flowers, which appear in May, are terminal, in large corymbs, two inches or more in diameter, and they are succeeded by scarlet fruit.

Mr. Loudon says that, "as an ornamental tree, the Whitebeam has some valuable properties. It is of a moderate size, and of a definite shape; and thus, bearing a character of art, it is adapted for particular situations, near works of art, where the violent contrast exhibited by trees of picturesque forms would be inharmonious. In summer, when clothed with leaves, it forms a compact green mass, till it is ruffled by the wind, when it suddenly assumes a mealy whiteness. In the winter season, the tree is attractive from its smooth branches and its large green buds; which, from their size and colour, seem already prepared for spring, and remind us of the approach of that delightful season. When the tree is covered with its fruit, it is exceedingly ornamental."

The Whitebeam may be raised from seed, which should be sown as soon as the fruit is ripe; other-

wise, if kept till spring, and then sown, they will not come up till the spring following. The varieties may be propagated by cuttings, or by layering; but they root, by both modes, with great difficulty. Layers require to be made of the young wood, and

Leaves, Flowers, and Fruit of *P. avium.*

to remain attached to the stool for two years. The rate of growth, when the tree is young, and in a good soil, is from eighteen to twenty-four inches a year: after it has attained the height of fifteen or twenty feet it grows much slower; but it is a tree of great duration. The roots descend very deep, and spread very wide; and the head of the tree is less affected by prevailing winds than almost any other. In the most exposed situations, on the Highland mountains, this tree is seldom seen above ten or fifteen feet high; but it is always stiff and erect. It bears lopping, and permits the grass to grow under it.

The wood is hard and tough, and of a very close grain, and will take a very high polish. It is much used for knife handles, wooden spoons, axle-trees, walking sticks, and tool-handles. Its principal use, however, is for cogs for wheels in machinery.

THE WILD BLACK CHERRY OR GEAN.

[*Prunus Avium.** Nat. Ord.—*Rosaceæ;* Linn.—*Icosa. Monogy.*]

The Cherry, in a wild state, is indigenous in Central Europe, and is also found in Russia up to 56° N. lat. In England, it is met with in woods and hedges; and is found apparently wild in Scotland and Ireland.

The Wild Cherry has grown in this country from fifty to eighty-five feet in height. In cultivation, whether in woods or gardens, it may, in point

* *Generic characters. Calyx* inferior, 5-cleft. *Petals* 5. *Drupe* roundish, covered with bloom; the *stone* furrowed at its inner edge.

of general appearance, be included in these forms:—Large trees with stout branches, and shoots proceeding from the main stem, nearly horizontally; fastigiate trees, or with the branches appressed to the stem, of a smaller size; and small trees with weak wood, and branches divergent and drooping. The leaves vary so much in the cultivated varieties, that it is impossible to characterise the sorts by them; but, in general, those of the large trees are largest, and the lightest in colour, and those of the slender-branched trees the smallest, and the darkest in colour; the flowers are also largest on the large trees. The specific characters of the Wild Black Cherry may be thus stated:—Leaves drooping, oblong, obovate, pointed, serrated, somewhat pendant, slightly pubescent on the under side, furnished with two glands at the base, and downy beneath. Flowers white, in nearly sessile umbels, not numerous. The colour of the fruit is a very deep, dark red, or black; the flesh is of the same colour, small in quantity, austere and bitter before it comes to maturity, and insipid when the fruit is perfectly ripe. The nut is oval or ovate, like the fruit, firmly adhering to the flesh, and very large in proportion to the fruit. The juice is mostly coloured: and the skin does not separate from the flesh.

As a tree, the Wild Cherry is not only valuable for its timber, but for the food which it supplies to birds, by increasing the number of which, the insects which attack trees of every kind are materially kept down. This is one reason why Cherry

trees are generally encouraged in the forests of France and Belgium: an additional reason, in Britain, is the nourishment which they afford to singing birds, particularly to the blackbird and thrush, and while any are to be found on the trees,

Leaves, Flowers, and Fruit of *P. Avium.*

they may be said to convert them into musical bowers. As an ornamental tree it is also worth cultivating, as it produces a profusion of flowers from an early age, and at an early period of the year; these from their snowy whiteness, contrast well with the blossom of the almond and the scarlet thorn. Its foliage is also handsome, though rather too uniform and unbroken to produce picturesque effect; in the autumn, when it assumes a deep purplish red colour, it gives a great richness to the landscape, and contrasts well with the yellows and browns which predominate at that season.

The Wild Cherry is also recommended for the copse, because it produces a strong shoot, and will shoot forth from the roots as the elm, especially if you fell lusty trees. In light ground it will increase to a goodly tall tree, of which some have been known to attain the height of more than eighty-five feet. Sir T. D. Lauder says, "It may very well be called a forest tree, seeing that in many parts of Scotland it is almost as numerous, and propagates itself as fast as the birch; it grows, moreover, to be a very handsome timber-tree, and the wood of it makes very pretty furniture. In form, it is oftener graceful than grand; and its foliage is rather too sparse to produce that tufty effect which gives breadth of light and depth of shadow enough to please the painter's eye. But on the cliffs of romantic rivers, such as the Findhorn, and other Scottish streams of the same character, where it is stinted of soil, it often shoots from the crevices of the rocks in very picturesque forms;

and the scarlet of its autumnal tint, when not in excess, sometimes produces very brilliant touches in the landscape, when the neighbouring trees happen to be in harmony with it;" and if "merely considered as a natural object, nothing can be more splendid than its appearance when covered with a full blow of flowers in spring, or more gorgeous than the hue of its autumnal livery."

"The Cherry has always been a favourite tree with poets; the brilliant red of the fruit, the whiteness and profusion of the blossoms, and the vigorous growth of the tree, affording abundant similies. At Ely, in Cambridgeshire, when the cherries are ripe, numbers of people repair, on what they call Cherry Sunday, to the cherry orchards in the neighbourhood; where, on the payment of 6*d.* each, they are allowed to eat as many cherries as they choose. A similar fête is held at Montmorency, in France. A festival is also celebrated annually at Hamburg, called the Feast of the Cherries, during which troops of children parade the streets with green boughs, ornamented with cherries. The original of this fête is said to be as follows:—In 1432, when the city of Hamburg was besieged by the Hussites, one of the citizens, named Wolf, proposed that all the children in the city, between seven and fourteen years of age, should be clad in mourning, and sent as suppliants to the enemy. Procopius Nasus, chief of the Hussites, was so much moved by this spectacle, that he not only promised to spare the city, but regaled the young suppliants with cher-

ries and other fruits; and the children returned crowned with leaves, shouting 'Victory!' and holding boughs laden with cherries in their hands."—*Loudon.*

The Common Wild Cherry is almost always raised from seed; but, as the roots throw up suckers in great abundance, these suckers might be employed for the same purpose. When plants are to be raised from seed, the cherries should be gathered when fully ripe and sown immediately with the flesh on, and covered with about an inch of light mould. The strongest plants, at the end of the next season, will be about eighteen inches in height; these may be drawn out from among the smaller plants, and transplanted into nursery rows, from whence they will, in another season, be fit to be transferred to the plantations, or to be grafted or budded. It will grow in any soil or situation, neither too wet nor entirely a strong clay. It stands less in need of shelter than any other fruit-bearing tree whatever, and for surrounding kitchen gardens, to form a screen against high winds. Dr. Withering observes that it thrives best when unmixed with other trees; that it bears pruning, and suffers the grass to grow under it.

THE WILD SERVICE-TREE.

[*Pyrus* torminalis.* Nat. Ord.—*Rosaceæ;* Linn.—*Icos. Pentag.*]

The Common Wild Service-tree is a native of various parts of Europe, from Germany to the Mediterranean, and of the south of Russia, and Western Asia. It is found in woods and hedges in the middle and south of England, but not in Scotland or Ireland. It generally grows in strong clayey soils.

This tree grows to the height of forty or fifty feet, spreading at the top into many branches, and forming a large head. The branches are well

* For the generic characters, see p. 243.

clad with leaves, and are covered when young with a purplish bark, with white spots. The leaves are on pretty long foot-stalks, and are nearly four inches in length and three in breadth in the middle, simple, somewhat cordate, serrate, seven-lobed, bright green on the upper side, and woolly underneath. The flowers are white, in large, terminal, downy panicles; they appear in May, and are succeeded by roundish compressed fruit, similar in appearance to large haws, and ripen late in autumn, when they are brown. If kept till they are soft, in the same way as medlars, they have an agreeable acid flavour.

The Service-tree gives the husbandman an early presage of the approaching spring, by putting forth its adorned buds; and it ventures to peep out even in the severest seasons. As an ornamental tree, its large green buds strongly recommend it in the winter and spring; as its fine large-lobed leaves do in summer, and its large and numerous clusters of rich brown fruit do in autumn.

The best mode of propagating the Service-tree is by suckers. Of these it puts forth a goodly number: and it may also be budded with great improvement. It prospers best in good stiff ground, of a nature rather cold than hot; for where the soil is too dry, it will not yield well. This tree may either be grafted on itself, or on the white thorn and quince. To this may be added the Mespilus, or medlar, being a very hard wood, and of which very beautiful walking-sticks are sometimes made. The timber of the Service-tree is

useful for the joiner, and it has occasionally been used for wainscoting rooms. It is also used for bows, pulleys, screws, mill and other spindles; for goads to drive oxen with; for pistol and gun stocks; and for most of the purposes for which the wild pear-tree is serviceable. It is valued by the turner

Leaves, Flowers, and Fruit of *P. torminalis*.

in the manufacture of various curiosities, having a very delicate grain, which makes a showy appearance; and it is very durable. When rubbed over with well-boiled linseed oil, it is an admirable imitation of ebony, or almost any Indian wood.

One of the finest specimens of the Service-tree in England is said to be at Arley Hall, near Bewdley. This tree is fifty-four feet six inches high; the diameter of the trunk, at a foot from the ground, is three feet six inches; and that of the head is fifty-eight feet eight inches.

THE WILLOW-TREE.

[*Salix* * Nat. Ord.—*Amentiferæ;* Linn.—*Dioec. Diand.*]

> The willow tribes that ever weep,
> Hang drooping o'er the glassy-bosom'd wave.
>
> BIDLAKE.

THE Willows are chiefly natives of the colder parts of the temperate regions of the northern hemisphere. More than two hundred species of this

* *Generic characters. Cathkins* oblong, imbricated all round, with oblong scales. *Perianth* none. *Stamens* 1-5. Fruit a 1-celled follicle with 1-2 glands at its base.

genus have been described by botanists, of which sixty-six are considered indigenous in this country. These are subdivided into scientific and economic groups. The economic groups are:—for growing as timber-trees, for coppice wood, for hoops, for basket-rods, for hedges, and for ornamental trees or shrubs.

The Babylonian or Weeping Willow, *S. Babylonica*, the portrait of which heads this article, is the most picturesque and beautiful tree of this genus. It is a native of Asia, on the banks of the Euphrates, near Babylon, whence its name; and also of China, and other parts of Asia; and of Egypt, and other parts of the north of Africa. It is said to have been introduced into England by the poet Pope, who planted it in his garden at Twickenham, where it was known until about 1800 as "Pope's Willow;" but it was more probably brought to Europe by the botanist Tournefort, before 1700. Of the Weeping Willow, Miller says, "It grows to a considerable size. I have one in my view whilst I am writing, which is four and a half feet in circumference at three feet above the ground, and is at least thirty feet in height; the age is thirty-four years. This tree is remarkable, and generally esteemed for its long slender pendulous branches, which give it a peculiar character, and render it a beautiful object on the margin of streams or pools. The leaves are minutely and sharply serrate, smooth on both sides, glaucous underneath, with the midrib whitish; on short petioles. Stipules, when present, roundish or semilunar, and very small; but more

frequently wanting, and then in their stead a glandular dot on each side. Catkins axillary, small, oblong; in the barren the filaments longer than the scale, with two ovate erect glands fastened to the base; the fertile on two-leafed peduncles, scarcely longer than half an inch."

The light airy spray of the Weeping Willow is pendent. The shape of its leaf is conformable to the pensile character of the tree; and its spray, which is lighter than that of the poplar, is more easily put into motion by a breath of air. The Weeping Willow, however, is not adapted to sublime subjects; but the associations which are awakened in conjunction with it, by that very beautiful psalm, "By the waters of Babylon we sat down and wept, when we remembered thee, O Sion! as for our harps, we hanged them up upon the Willows,"—are of themselves sufficient to impart to it an interest in every human breast touched by the sublime strains of the Psalmist.

> On the Willow thy harp is suspended,
> O Salem! its sound shall be free;
> And the hour when thy glories were ended,
> But left me that token of thee.
> And ne'er shall its soft notes be blended,
> With the voice of the spoiler by me.
>
> BYRON.

Gilpin says we do not employ the Willow to screen the broken buttresses and Gothic windows of an abbey, nor to overshadow the battlements of a ruined castle. These offices it resigns to the oak, whose dignity can support them. The Weeping Willow seeks a humbler scene—some romantic foot-

path bridge, which it half conceals, or some glassy pool, over which it hangs its streaming foliage,

> —and dips
> Its pendent boughs, stooping, as if to drink.

In these situations it appears in character, and to advantage.

No poet ever mentions the Weeping Willow but in connection with sad and melancholy thoughts. Burns, in his "Braes of Yarrow," thus sings:

> Take off, take off these bridal weeds,
> And crown my careful head with Willow.

Prior alludes to the afflicted daughters of Israel:

> Afflicted Israel shall sit weeping down,
> Their harps upon the neighbouring Willows hung.

And Dr. Booker refers to the same pathetic scene:

> Silent their harps (each cord unstrung)
> On pendent Willow branches hung.

The Willow is generally found growing on the borders of small streams or rivers. The Sacred writers almost constantly refer to this natural habit. Thus in Job we read:

> The shady trees cover him with their shadows; the Willows of the brook compass him about (xl. 22).

And again, Isaiah, in two places, speaks of its connection with the brook:

> That which they have laid up, shall they carry away to the brook of the Willows (xv. 7).
>
> They shall spring up as among the grass, as Willows by the water-courses (xliv. 4).

And Ezekiel refers to this habit of the Willow:

He took also of the seed of the land, and placed it by great waters, and set it as a Willow-tree (xvii. 5).

And in referring to profane authors, we find Milton speaking of

—the rushy-fringed bank
Where grows the Willow.

An anonymous writer, too, mentions

The thirsty Salix bending o'er the stream,
Its boughs as banners waving to the breeze.

The pastoral poet Rowe places his despairing Shepherd under Silken Willows. Thus he sings—(we will give the chorus in the first verse, and not repeat it, as it would occupy too much space):

To the brook and the Willow that heard him complain,
Ah, Willow, Willow;
Poor Colin sat weeping, and told them his pain;
Ah, Willow, Willow; ah, Willow, Willow.

Sweet stream, he cry'd sadly, I'll teach thee to flow,
And the waters shall rise to the brink with my woe.

All restless and painful poor Amoret lies,
And counts the sad moments of time as it flies.

To the nymph my heart loves, ye soft slumbers repair,
Spread your downy wings o'er her, and make her your care.

Dear brook, were thy chance near her pillow to creep,
Perhaps thy soft murmurs might lull her to sleep.

Let me be kept waking, my eyes never close,
So the sleep that I lose brings my fair one repose.

But if I am doom'd to be wretched indeed;
If the loss of my dear-one, my love is decreed;

If no more my sad heart by those eyes shall be cheered;
If the voice of my warbler no more shall be heard;

Believe me, thou fair-one; thou dear-one believe,
Few sighs to thy loss, and few tears will I give.

One fate to thy Colin and thee shall be ty'd,
And soon lay thy shepherd close by thy cold side.

Then run, gentle brook; and to lose thyself, haste;
Fade thou, too, my Willow; this verse is my last.

Chatterton, in one of his songs, has the following lines:

Mie love ys dedde,
Gon to ys deathe-bedde,
Al under the Wyllowe-tree.

In Ovid we read of

A hollow vale, where watery torrents gush,
Sinks in the plain; the osier, and the rush,
The marshy sedge and bending Willow nod
Their trailing foliage o'er its oozy sod.

And Churchill speaks of

The Willow weeping o'er the fatal wave,
Where many a lover finds a watery grave.

Shakspeare introduces it in Hamlet, where he describes the place of Ophelia's death:

There is a Willow grows ascant the brook,
That shows his hoar leaves in the glassy stream;
There with fantastic garlands did she make,
Of crow-flowers, nettles, daisies, and long purples,
That liberal shepherds give a grosser name,
But our cold maids do dead men's fingers call them:
There on the pendent boughs her coronet weeds
Clambering to hang, an envious silver broke;
When down her weedy trophies and herself
Fell in the weeping brook.

The Willows that attain the size of trees of the first and second rank, and that produce valuable timber, are the four following:—The Crack Willow, the Russell Willow, the Huntingdon Willow, and the Goat Willow.

The Crack or Red-wood Willow, *S. fragilis*, is a

Leaves and Catkins of *S. fragilis*.

tall bushy tree, sometimes growing from eighty to ninety feet in height, with the branches set on obliquely, somewhat crossing each other, not continued in a straight line outwards from the trunk; by which character it may be readily distinguished even in winter. The branches are round, very smooth, "and so brittle at the base, in spring, that with the slightest blow they start from the trunk," whence the name of Crack Willow. Its leaves are ovate-lanceolate, pointed, serrated throughout, very glabrous. Foot-stalks glandular, ovary ovate, abrupt, nearly sessile, glabrous. Bracts oblong, about equal to the stamens and pistils. Stigmas cloven, longer than the style.

The Russell or Bedford Willow, *S. Russelliana*, is frequently found from eighty to ninety feet in height. It is more handsome than *S. fragilis* in its mode of growth, as well as altogether of a lighter or brighter hue. The branches are long, straight, and slender, not angular in their insertion, like those of *S. fragilis*. The leaves are lanceolate, tapering at each end, serrated throughout, and very glabrous. Foot-stalks, glandular or leafy. Ovary tapering; stalked, longer than the bracts. Style as long as the stigma. Dr. Johnson's favourite Willow, at Lichfield, was of this species. In 1781, the trunk of this tree rose to the height of nearly nine feet, and then divided into fifteen large ascending branches, which, in any numerous and crowded subdivisions, spread at the top in a circular form, not unlike the appearance of a shady oak, inclining a little towards the east. The circumference of the

trunk at the bottom was nearly sixteen feet; in the middle about twelve feet; and thirteen feet at the top, immediately below the branches. The entire height of the tree was forty-nine feet; and the circumference of the branches, at their extremities, upwards of two hundred feet, overshadowing a plane not far short of four thousand feet. This species was first brought into notice for its valuable properties as a timber-tree, by the late Duke of Bedford; whence its name.

The Huntingdon, or Common White Willow, *S. alba*, grows rapidly, attaining the height of thirty feet in twelve years, and rising to sixty feet in height, or upwards, even in inferior soils; while, in favourable situations, it will reach the height of eighty feet, or upwards. "The bark is thick and full of cracks. The branches are numerous, spreading widely, silky when young. The leaves are all alternate, on shortish foot-stalks, lanceolate, broadest a little above the middle, pointed, tapering towards each end, regularly and acutely serrated, the lowest serrature most glandular; both sides of a grayish, somewhat glaucous, green, beautifully silky, with close-pressed silvery hairs, very dense and brilliant on the uppermost, or youngest leaves; the lowermost on each branch, like the bracts, are smaller, more obtuse, and greener. Stipules variable, either roundish or oblong, small, often wanting. Catkins on short stalks, with three or four spreading bracts, for the most part coming from the leaves, but a few more often appear after midsummer; they are all cylindrical, rather slender,

obtuse, near one and a half inch long. Scales fringed, rounded at the end; those of the barren catkins narrower towards the base; of the fertile, dilated and convolute in that part. Two obtuse glands, one before, the other behind the stamens. Filaments hairy in their lower part. Anthers roundish, yellow. Ovary very nearly sessile, green, smooth, ovate, lanceolate, bluntish, longer than the scale. Style short. Stigmas short, thickish, cloven. Capsule ovate, brown, smooth, rather small."

The Goat Willow, Large-leafed Sallow, or Saugh, *S. caprea*, is distinguished from all the other Willows by its large ovate, or sometimes orbicular ovate leaves, which are pointed, serrated, and waved on the margin; beneath they are of a pale glaucous colour, and clothed with down, but dark green above; varying in length from two to three inches. Foot-stalks stout, downy. Stipules crescent-shaped. Capsules lanceolate, swelling. Style very short. Buds glabrous. Catkins very thick, oval, numerous, nearly sessile, expanding much earlier than the foliage. The ovary is stalked, silky, and ovate in form; the stigmas are undivided, and nearly sessile. In favourable situations this tree attains a height of from thirty to forty feet, with a trunk from one to two feet in diameter. It seldom, however, possesses any considerable length of clean stem, as the branches which form the head generally begin to divide at a moderate height, and diverging in different directions, give it the bearing and appearance of a compact, round-headed tree. It grows in almost all soils and situa-

tions, but prefers dry loams, and in such attains its greatest size.

There are very few existing Willow-trees remarkable for age or size. The one most worthy of note is the Abbot's Willow, at Bury St. Edmunds. It grows on the banks of the Lark, a small river running through the park of John Benjafield, Esq. It is seventy-five feet in height, and the stem is eighteen feet and a half in girth; it then divides in a very picturesque manner into two large limbs, one fifteen and the other twelve feet in girth. It shadows an area of ground two hundred and four feet in diameter, and the tree contains four hundred and forty feet of solid timber.

The uses of the Willow are perhaps equal to those of any other species of our native trees; it is remarked that it supports the banks of rivers, dries marshy soil, supplies bands or withies, feeds a great variety of insects, rejoices bees, yields abundance of fine wood, affords nourishment to cattle with its leaves, and yields a substitute for Jesuit's bark; to which Evelyn adds, all kinds of basket work, pill-boxes, cart saddle-trees, gun-stocks, and half-pikes, harrows, shoemakers' lasts, forks, rakes, ladders, poles for hop vines, small casks and vessels, especially to preserve verjuice in. To which may be added cricket-bats, and numerous other articles where lightness and toughness of wood are desirable. The wood of the Willow has also the property of whetting knives like a whetstone; therefore all knife-boards should be made of this tree in preference to any other.

From the earliest times, the various species of Willow have been made use of by man for forming articles of utility; but as an account of our principal forest trees is the object of this work, it would be out of place to describe those species which are cultivated for coppice wood, hoops, basket-rods, or hedges. We may, however, remark that the shields of the ancients were made of wicker work, covered with ox-hides; that the ancient Britons served up their meats in osier baskets or dishes, and that these articles were greatly admired by the Romans.

> A basket I by painted Britons wrought,
> And now to Rome's imperial city brought.

And for want of proper tools for sawing trees into planks, the Britons and other savages made boats of osiers covered with skins, in which they braved the ocean in quest of plunder:—

> The bending Willow into barks they twined,
> Then lined the work with spoils of slaughtered kind;
> Such are the floats Venetian fishers know,
> Where in dull marshes stands the settling Po,
> On such to neighbouring Gaul, allured by gain,
> The bolder Briton crossed the swelling main.
>
> Rowe's *Lucan.*

THE YEW-TREE.

[*Taxus* baccata.* Nat. Ord.—*Taxaceæ;* Linn.—*Diœc. Monad.*]

THE Berried or Common Yew is indigenous to most parts of Europe, from 58° N. lat. to the Mediterranean Sea; also to the east and west of Asia; and of North America. It is found in every part of Britain, and also in Ireland: on limestone cliffs, and in mountainous woods, in the south of England; on schistose, basaltic, and

* *Generic characters.* *Barren* flowers in oval catkins, with crowded, peltate scales, bearing 3 to 8 anther-cells. *Stamens* numerous. *Style* 1. *Anthers* peltate, with several lobes. *Fertile* flowers scaly below. *Ovule* surrounded at the base by a ring, which becomes a fleshy cup-shaped disk surrounding the seed.

other rocks, in the north of England: and in Scotland, it is particularly abundant on the north side of the mountains near Loch Lomond. In Ireland, it grows in the crevices of rocks, at an elevation of 1200 feet above the level of the sea; but at that height it assumes the appearance of a low shrub. The Yew is rather a solitary than a social tree; being generally found either alone or with trees of a different species.

The Yew-tree rises from the ground with a short but straight trunk, which sends out, at the height of three or four feet, numerous branches, spreading out nearly horizontally, and forms a head of dense foliage. When full grown it attains the height of from thirty to fifty feet. The trunk and bark are channelled longitudinally, and are generally rough, from the protruding remains of shoots which have decayed and dropped off. The bark is smooth, thin, of a brown colour, and scales off like the pine. The branches are thickly clad with leaves, which are two-rowed, crowded, naked, linear, entire, very slightly revolute, and about one inch long; very dark green, smooth, and shining above; paler, with a prominent midrib, beneath; terminating in a point. The flowers, which appear in May, are solitary, proceeding from a scaly axillary bud; those of the barren plant are pale brown, and discharge a very abundant yellowish white pollen. The fertile flowers are green, and in form not unlike a young acorn. Fruit drooping, consisting of a sweet, internally glutinous, scarlet berry, open at the top, inclosing

a brown oval nut, unconnected with the fleshy part. The kernels of these nuts are not deleterious, as supposed by many, but may be eaten, and they possess a sweet and agreeable nutty flavour.

Of all trees the Yew is the most tonsile. Hence

Foliage, Leaves, and Fruit of *T. baccata.*

all the indignities it formerly suffered. Everywhere it was cut and metamorphosed into such a variety of deformities, that we could hardly conceive that it had any natural shape, or the power which other trees possess, of hanging carelessly and negligently. Yet it has this power in a very eminent degree; and in a state of nature, except in exposed situations, is perhaps one of the most beautiful evergreens we have. It is now, however, seldom found in a state of perfection. Not ranking among timber-trees, it is thus in a degree unprivileged, and unprotected by forest laws, and has often been made booty of by those who durst not lay violent hands on the oak or the ash. But still, in many parts of the New Forest, some noble specimens of it are left. There is one which was esteemed by Gilpin to be a tree of peculiar beauty. It immediately divides into several massy limbs, each of which, hanging in grand loose foliage, spreads over a large compass of ground, and yet the whole tree forms a close compact body; that is, its boughs are not so separated as to break into distinct parts. It is not equal in size to the Yew at Fotheringal, near Taymouth, in Scotland, which measures fifty-six and a half feet in circumference, nor to many others on record; but is of sufficient size for all the purposes of landscape, and is in point of picturesque beauty probably equal to any of them. It stands near the left bank of Lymington river, as you look towards the sea, between Roydon Farm and Boldre Church.

So long as the taste prevailed for metamorphos-

ing the Yew into obelisks, pyramids, birds, and beasts, it was very commonly planted near houses. Now it is nearly banished from the precincts of our residences and pleasure grounds; not, it would appear, from any real objection that can be urged either against its form or the effect it produces, but from now considering it as a funereal tree, and associating it with scenes of melancholy and the grave, a feeling doubtless arising from many of our most venerable and celebrated specimens growing in ancient church-yards. The origin of these locations is now considered to have arisen from churches having been erected on the sites of Druidical places of worship in Yew groves, or near old Yew-trees. Hence the planting of Yews in church-yards is a custom of heathen origin, which was ingrafted on Christianity on its introduction into Britain.

The sepulchral character of the Yew is thus referred to by Sir Walter Scott, in *Rokeby*:—

> But here 'twixt rock and river grew
> A dismal grove of sable Yew.
> With whose sad tints were mingled seen
> The blighted fir's sepulchral green.
> Seemed that the trees their shadows cast,
> The earth that nourished them to blast;
> For never knew that swathy grove
> The verdant hue that fairies love,
> Nor wilding green, nor woodland flower,
> Arose within its baleful bower.
> The dank and sable earth receives
> Its only carpet from the leaves,
> That, from the withering branches cast,
> Bestrewed the ground with every blast.

And Kirke White, in a fragment written in Wilford church-yard, near Nottingham, on occasion of his recovering from sickness, thus introduces it:—

> Here would I wish to sleep.—This is the spot
> Which I have long marked out to lay my bones in;
> Tired out and wearied with the riotous world,
> Beneath this Yew I would be sepulchred.

While in that beautiful and pathetic Elegy of Gray's, which is familiar to every mind in Britain, we read:—

> Beneath————that Yew-tree's shade,
> Where heaves the turf in many a mouldering heap,
> Each in his narrow cell for ever laid,
> The rude forefathers of the hamlet sleep.

Poor Carrington has the following lines on the Yew-tree, in a poem entitled *My Native Village.* The author is buried in the little quiet church-yard of Combehay, a sequestered village at a short distance from Bath. It is situated in a deep and unfrequented valley, where some of the finest and most luxuriant scenery in the west of England may be found. It was chosen, his son tells us, because it is a spot which, when living, he would have loved full well:—

> Tree of the days of old—time-honour'd Yew!
> Pride of my boyhood—manhood—age, Adieu!
> Broad was thy shadow, mighty one, but now
> Sits desolation on thy leafless bough!
> That huge and far-fam'd trunk, scoop'd out by age,
> Will break, full soon, beneath the tempest's rage:
> Few are the leaves lone sprinkled o'er thy breast,
> There's bleakness, blackness on thy shiver'd crest!

When Spring shall vivify again the earth,
And yon blest vale shall ring with woodland mirth,
Morning, noon, eve,—no bird with wanton glee
Shall pour anew his poetry from thee;
For thou hast lost thy greenness, and he loves
The verdure and companionship of groves—
Sings where the song is loudest, and the spray,
Fresh, fair, and youthful, dances in the ray!
Nor shall returning Spring, o'er storms and strife
Victorious, e'er recal thee into life!
Yet stand thou there—majestic to the last,
And stoop with grandeur to the conquering blast.
Aye, stand thou there—for great in thy decay,
Thou wondrous remnant of a far-gone day,
Thy name, thy might, shall wake in rural song,
Bless'd by the old—respected by the young;
While all unknown, uncar'd for,—oak on oak
Of yon tall grove shall feel the woodman's stroke;
One common, early fate awaits them all,
No sympathizing eye shall mark their fall;
And beautiful in ruin as they lie,
For them shall not be heard one rustic sigh!

Since the use of the bow has been superseded by more deadly instruments of warfare, the cultivation of the Yew is now less common. This, says Evelyn, is to be deplored; for the barrenest ground and coldest of our mountains might be profitably replenished with them. However, in winter, we may still see some of the higher hills in Surrey clad with entire woods of Yew and cypress, for miles around, as we stand on Box Hill; and might, without any violence to the ordinary powers of imagination, fancy ourselves transported into a new or enchanted country. Indeed, Evelyn remarked, in his day, that if in any spot in England,

—'tis here
Eternal spring and summer all the year.

Our venerable author records a Yew tree, ten yards in girth, which grew in the church-yard of Crowhurst, in the county of Surrey. And another standing in Braburne church-yard, near Scot's Hall, Kent; which being fifty-eight feet eleven inches in circumference, would be near 20 feet in diameter.

There are several remarkable existing church-yard Yews in this country. The tallest, which is at Harlington, near Hounslow, is fifty-six feet in height; another at Martley, Worcestershire, is about twelve yards in circumference; and at Ashill, Somersetshire, there are two very large trees—one fifteen feet round, extending its branches north and south fifty-six feet; the other dividing into three large trunks a little above the ground, but having many of its branches decayed. There are also eleven Yew-trees in the church-yard of Aberystwith, the largest being twenty-four feet, and the smallest eleven feet six inches, in circumference.

There is also a group of Yews at Fountain's Abbey worthy of remark on their own account, and they are also interesting in a historical view. Burton gives the following notice of them:—"At Christmas the Archbishop, being at Ripon (anno 1132), assigned to the monks some lands in the patrimony of St. Peter, about three miles west of that place, for the erecting of a monastery. The spot of ground had never been inhabited, unless by wild beasts, being overgrown with wood and brambles, lying between two steep hills and rocks, covered with wood on all sides, more proper for a retreat for wild beasts than the human species.

This was called Skeldale, or the vale of the Skell, a rivulet running through it from the west to the eastward part of it. The Archbishop also gave to them a neighbouring village, called Sutton Richard. The prior of St. Mary's, at York, was chosen abbot by the monks, being the first of this monastery of Fountain's, with whom they withdrew into this uncouth desert, without any house to shelter them in the winter season, or provisions to subsist on; but entirely depending on Divine Providence. There stood a large elm in the midst of the vale, on which they put some thatch or straw, and under that they lay, eat, and prayed, the bishop for a time supplying them with bread, and the rivulet with drink. Part of the day some spent in making wattles, to erect a little oratory, whilst others cleared some ground, to make a little garden. But it is supposed that they soon changed the shelter of the elm for that of seven Yew-trees, growing on the declivity of the hill, on the south side of the Abbey, all standing at this present time, except the largest, which was blown down about the middle of the last century. They are of extraordinary size; the trunk of one of them is twenty-six feet six inches in circumference, at the height of three feet from the ground; and they stand so near each other, as to form a cover almost equal to a thatched roof. Under these trees, we are told by tradition, the monks resided till they built the monastery, which seems to be very probable, when we consider how little a Yew-tree increases in a year, and to what a bulk these are grown. And as the hill-side was

covered with wood, which is now cut down, except these trees, it seems as if they were left standing to perpetuate the memory of the monks' habitation there, during the first winter of their residence."

Wordsworth gives us the following animated description of a noted Yew in Lorton Vale; and also of four others—the "fraternal four,"—growing in Borrowdale:—

There is a Yew-tree, pride of Lorton Vale,
Which to this day stands single, in the midst
Of its own darkness, as it stood of yore,
Nor loth to furnish weapons for the bands
Of Omfraville or Percy, ere they marched
To Scotland's heath; or those that crossed the sea,
And drew their sounding bows at Agincourt,
Perhaps at earlier Crecy, or Poictiers.
Of vast circumference and gloom profound
This solitary tree! a living thing
Produced too slowly ever to decay;
Of form and aspect too magnificent
To be destroyed. But worthier still of note
Are these fraternal four of Borrowdale,
Joined in one solemn and capacious grove;
Huge trunks! and each particular trunk a growth
Of intertwisted fibres serpentine
Up-coiling, and inveterately convolved,—
Nor uninformed with phantasy, and looks
That threaten the profane;—a pillared shade
Upon whose grassless floor of red-brown hue,
By sheddings from the pining umbrage tinged
Perennially—beneath whose sable roof
Of boughs, as if for festal purpose, decked
With unrejoicing berries, ghostly shapes
May meet at moontide—Fear and trembling Hope,
Silence and Foresight—Death the Skeleton,
And Time the Shadow,—there to celebrate,
As in a natural temple scattered o'er
With altars undisturbed of mossy stone;
United worship; or in mute repose

To lie, and listen to the mountain flood
Murmuring from Glaramara's inmost caves.

The Yew is easily propagated by sowing the berries as soon as they are ripe (without clearing them from the surrounding pulp), upon a shady bed of fresh soil, covering them over about half an inch with the same earth. Many plants will appear in spring, while others will remain in the ground until autumn, or the spring following. When the plants come up, they should be kept free from weeds, or they will be choked and frequently destroyed. The plants may remain in the original bed two years, and then be removed early in October into beds four or five feet wide, each plant a foot apart from the next, and the same distance in the rows; taking care to lay a little muck over the ground about their roots, and to water them in dry weather. There the plants may remain two or three years, according to their growth, when they should be transplanted into nursery rows at three feet distance, and eighteen inches asunder. This operation must be performed in autumn. After remaining three or four years in the nursery, they may be planted where they are to remain, observing to remove them in autumn where the ground is very dry, and in spring where it is cold and moist. Whether as an evergreen undergrowth or as a timber-tree, the Yew deserves to be more extensively cultivated than heretofore. As an underwood, it is scarcely inferior to the holly, and only so in failing to produce those sparkling effects of light which distinguish the larger and more highly

glazed dark green foliage of that tree: in hardihood it is its equal, and it bears, with the same comparative impunity, the drip and shade of many of our loftier deciduous trees, a quality of great importance where an evergreen wood is desired. The great value and durable properties of its wood ought also to favour its introduction into our mixed plantations, even where profit is the chief object in view, the value of the wood well compensating for the slowness of its growth. Besides, when fostered by the shelter of surrounding trees, it would be drawn up and grow much more rapidly, and with a cleaner stem.

The Yew is not only celebrated for its toughness and elasticity—it is a common saying among the inhabitants of the New Forest, that a post of Yew will outlast a post of iron. The veins of its timber exceed in beauty those of most other trees, and its roots are not surpassed by the ancient citron. The artists in box most gladly employ it; and for the cogs of mill wheels and axletrees, there is no wood to be compared to it.

We extract the following table from the ancient laws of Wales, showing the comparative worth of a Yew with other trees:—

A consecrated Yew, its value is a pound.
An oak, its value is six score pence.
A mistletoe branch, its value is three score pence.
Thirty pence is the value of every principal branch in the oak.
Three score pence is the value of every sweet apple-tree.
Thirty pence is the value of a sour apple-tree.
Fifteen pence is the value of a good Yew-tree.
Seven pence halfpenny is the value of a thorn-tree.

FORESTS AND WOODLANDS

OF

GREAT BRITAIN AND IRELAND.

THE British isles, like other countries of Europe, were in former times abundantly covered with forests. The first general attack made upon these in England was in 1536, when Henry VIII. confiscated the church lands, and distributed them, together with their woods, among numerous grantees. But it was not until between the civil war which broke out in 1642 and the restoration in 1660, that the royal forests, as well as the woods of the nobility and gentry, were materially diminished. During these few years, however, many extensive forests so completely disappeared, that hardly any memorial was left of them but their name. These two great territorial changes were followed by increased social and national prosperity. Though we have now hardly any forests or woodlands of considerable extent, there are perhaps few countries over which timber is more equably distributed, that is, in those counties where the soil and aspect are favourable to its growth. Woods of small extent, coppices, clumps, and clusters of trees are very generally distributed over the face of the country, which, together with the timber scattered in the hedge-rows, constitute a mass of wood of no inconsiderable importance.

In Herefordshire, Warwickshire, Northamptonshire, and Staffordshire is abundance of fine oak and elm woods. In Buckinghamshire there is much birch and oak, and also fine beech. Sussex, once celebrated for the extent and quality of its oak forests, has yet some good timber; at present its woodlands, including coppice-wood, occupy 175,000 acres. Essex, with 50,000 acres of woodland, has some elms and oaks. Surrey, Hertfordshire, and Derbyshire abound in coppice-woods. In Worcestershire is abundance of oak and elm. In Oxfordshire there are the forests of Wychwood and Stokenchurch, chiefly of beech, with some oak, ash, birch, and aspen. Berkshire con-

tains a part of Windsor forest; and Gloucestershire, the Forest of Dean; so that these three last counties are extensively wooded and with noble trees. Cheshire has few woods of any extent, but the hedge-row timber and coppices are in such abundance as to give the whole country, especially when seen from an elevation, the appearance of a vast forest. Of the remaining counties some have very little wood, and a few are altogether without it; but the want and value of timber have given rise to a great many flourishing plantations. In Wales particularly, there is a rage for planting. In South Wales alone six millions of trees, it is said, are annually planted; if that is the case, nine-tenths of the number must come to nothing, or the whole country would be one entire forest.

Scotland has few forests of large timber, if we except the woods of Inverness-shire and Aberdeenshire. In the former of these counties the natural pine-woods exceed the quantity of this wood growing naturally in all the rest of Britain. In Strathspey alone, there are 15,000 acres of natural firs; and in other parts, the woods are reckoned by miles, not by acres; there are also oak woods and extensive tracts of birch. In Aberdeenshire, in the higher divisions of Mar, there are 100 square miles of wood and plantations. The pines of Braemar are magnificent in size, and are of the finest quality. Argyleshire, Dumbartonshire, and Stirlingshire have many thousands of acres of coppice-wood, and, with a very few exceptions, the remaining counties have many, and some very extensive plantations.

Ireland has every appearance of having been once covered with wood, but at the present day, timber is exceedingly scarce in that country, there being no woods, if we except a portion along the sea-coast of Wicklow, the borders of the Lake Gilly, in Sligo, some remains of an ancient forest in Galway, and some small woods round Lough Lene, in the county of Kerry. The lakes of Westmeath have also some wooded islands. There are extensive plantations in Waterford, and a few natural woods, of small extent, in Cavan and Down; but Fermanagh is the best-wooded part of Ireland. The want of wood, however, in this country, as far as it is employed for fuel, is little felt, in consequence of its extensive bogs, which furnish an almost inexhaustible quantity of peat.

Upon the whole then, though Great Britain and Ireland do not now possess any extensive forests, still there is a considerable quantity of timber, and the extent of new plantations seems to promise that we shall never be wholly destitute of so essential an article as wood. According to M'Culloch, there is annually cut down in Great Britain and Ireland, timber to the amount of £2,000,000.

In this country, even in the time of the Saxons, the forests or tracts, more or less covered with wood, were generally public or crown lands, in which the king was accustomed to take the diversion of hunting, and that hunting from which all other persons were prohibited. This distinctly appears from the laws of king Canute, enacted in 1016. But the prohibition against hunting in these, was merely a protection thrown around the property of the crown of the same kind with that afforded to all other landed estates, in regard to which, universally, the law was, that every proprietor might hunt in his own woods or fields, but that no other person might do so without his leave. On the establishment, however, of the Norman government, it has generally been supposed that the property of all the animals of chase throughout the kingdom was held to be vested in the crown, and no person, without the express licence of the crown, was allowed to hunt even upon his own estate. But this, after all, is rather a conjecture; and, perhaps, all that we are absolutely entitled to affirm, from the evidence we possess on the subject, is, that after the Norman conquest the royal forests were guarded with much greater strictness than before; that possibly in some cases their bounds were enlarged; that trespasses upon them were punished with much greater severity; and, finally, that there was established a new system of laws and of courts for their administration.

In the language of the law, forests and chases differ from parks in not being enclosed by walls or palings, but only encompassed by metes and bounds; and a chase differs from a forest, both in being of much smaller extent (so that there are some chases within forests) and in its capability of being held by a subject, whereas a forest can only be in the hands of the Crown. But the material distinction is, or rather was, that forests alone were subject to the forest laws so long as they subsisted. Every forest, however, was also a chase. A forest is defined by Manwood, the great authority on the forest laws, as being "a certain territory or circuit of woody grounds and pastures, known in its bounds, and privileged, for the peaceable being and abiding of wild beasts, and fowls of forest, chase, and warren, to be under the king's protection for his princely delight; replenished with beasts of venery or chase, and great coverts of vert for succour of the said beasts; for preservation whereof there are particular laws, privileges, and officers belonging thereunto." The beasts of park or chase, according to Coke, are properly the buck, the doe, the fox, the marten, and the roe; but the term, in a wider sense, comprehends all the beasts of the forest. Beasts of warren are such as hares, conies, and roes; fowls of warren, such as the partridge, quail, rail, pheasant, woodcock, mallard, heron, &c.

The national woodlands of England, for many centuries, consisted of 49 forests, 13 chases, and 781 parks; some of them

being of great extent, as the New Forest in Hampshire, which still contains about 66,291 acres, and extends over a district of 20 miles from north-east to south-west, and about 15 miles from east to west. Recent parliamentary inquiry has so fully established long-continued mismanagement, embezzlement of timber, and encroachments upon the national forests and parks, that a considerable portion of what remains will probably be shortly sold or leased for general cultivation. The principal remaining national forests and parks are :—

1. New Forest, Hampshire.
2. Dean Forest, Gloucestershire.
3. High Meadow Woods, do.
4. Alice Holt, Hampshire.
5. Woolmer Forest, do.
6. Parkhurst Forest, do.
7. Bere Forest, do.
8. Whittlebury Forest, Notts.
9. Salcey Forest, do.
10. Delamere Forest, Cheshire.
11. Wychwood Forest, Oxfordshire.
12. Waltham Forest, Essex.
13. Chopwell Woods, Durham.
14. The London Parks.
15. Greenwich Park.
16. Richmond Park.
17. Hampton and Bushy Parks.
18. Windsor Forest and Parks.

MISCELLANEOUS INDEX.

*** The Names of the Trees described are given at page vii and viii.

PAGE

Alder timber valuable for piles 45
Amazons, spears of the 49
Aspen described 204
Autumn, the Season of Landscape 16
Bees, their fondness for the Linden flower . . . 136
Birch wine 66
Blasted tree, its effect 22
Bryony berries, ornamental, in their various stages . 23
Cadenham Oak 172
Clump of trees 25
Consecrated Yew-trees, ancient value of 280
Copse, its use 29
Cowper's Address to the Yardley Oak 181
Cowthorpe Oak, near Wetherby 180
Edlington 9
Elm-tree, anciently considered as a funeral tree . . 86
Ezekiel's (the Prophet) description of the Cedar-tree . 71
Forests and woodlands in the United Kingdom . . 281
Gilpin, grave of the Rev. W. —— 140
Glen, its character 32
God's First Temples, Bryant's 36
Gog and Magog 181
Grove, its character 33
Harefield Park in 1663, Silver Firs at 218
Hawthorn, Queen Mary's 94
Hern's Oak, Windsor Forest 177

PAGE
Holly-tree, supposed origin of the name 107
——— Persian tradition and custom connected with the 108
Honeysuckle, wild, its ornamental effect . . . 23
Hop, its effect when supported by a tree 24
Hornbeam Maze, at Hampton Court 110
Horse-chestnuts, finest at Bushy Park 119
Inscription for the entrance into a wood, Bryant's . 40
Ivy on Trees 22
Larch-tree, durability of its timber 130
Leafing of Trees 13
Leonard, Legend of St. 60
Lightness a characteristic of beauty in Trees . . . 19
Lime-tree avenues 133
Lover's Tablet, the 56
Magdalen College, Oxford, founded near "the great Oak" 168
Maple-tree crusca and mollusca 142
——— the Sugar 143
Mole, the 42
Moss, its picturesque effect on the trunk of an aged Oak 21
Motion, a source of picturesque beauty 24
Mountain Ash, Supersititions connected with the . . 149
Mulberry-tree, Shakspere's 153
Norway Spruce Fir, the loftiest of European trees . . 223
Nutting, pleasures of 99
Oak-tree, the emblem of grandeur, strength, and duration 158
Ornamental appendages to Trees 22
Pine timber, character and value of 215
Poplar dedicated to Hercules 206
Pyramus and Thisbe, Fable of 155
Queen Mary's Thorn 94
Ravenna Pines at Hampstead, near London . . . 216
Reynolds, Tribute to Sir J. 133
Rufus, tradition respecting the place of his death . . 170
Scotch Fir or Pine, durability of its timber . . . 215
Shire Oak, near Worksop 170
Swilcar Oak, in Needwood Forest 179

PAGE
Sycamore, Wordsworth's allusion to the 229
Tamer, the finest Chestnut trees on the 80
Traveller's joy ornamental 23
Tree as a single object 18
Venice Turpentine, how obtained 127
Vernal Melody in the Forest 15
Vine-clad branches of Trees 23
Wallace's Oak 176
Walnut-tree, a miraculous 238
Water-pipes, Elm 89
Willow bark, a substitute for Jesuit's bark 267
Woodlands and forests in the United Kingdom 281
Yardley Oak 180
Yew-tree, Wordsworth's description of a noted . . . 278
Zoroaster, the Holly and the disciples of 108

GLASGOW:
W. G. BLACKIE AND CO., PRINTERS,
VILLAFIELD.

Deans' New Series of 2s. 6d. PRESENT BOOKS

(Similar to this Book),

Size 8vo small crown, cloth gilt, Illustrated with FOUR PICTURES IN COLOURS. Seven sorts, viz :—

1. **Adventures of a Monkey ;**
   or, a Voyage on a Raft. A Tale replete with Interest and Entertainment. By CATHERINE CROWE, Author of "Susan Hopley," etc. Title-page and Illustrations in Colours. 2s. 6d.

2. **Fanny and Arthur ;**
   or, Persevere and Prosper. A well-written, interesting Story for Children, by Mrs. HOOPER, Author of "Peppy's Warning." Title-page and Illustrations in Colours. Cloth gilt, 2s. 6d.

3. **Happy Tales for Happy Hearts.**
   A Series of delightfully-written Stories, pleasantly inculcating Goodness and Kindness. By the Author of "Spring Flowers and Christmas Berries." Title and Illustrations in Colours. Cloth gilt, 2s. 6d.

4. **Eva and Her Playfellows.**
   A Book for All who Love the Sight of Flowers. By C. M. SMITH. Coloured Plates, cloth gilt.

5. **Joyful Sunday Stories ;**
   By MRS. UPCHER COUSENS. Price 2s. 6d. Illustrated and handsomely bound, cloth gilt.

6. **Davy's School Days ;**
   or, DEEDS SPEAK LOUDER THAN WORDS. By MRS. CUNNINGHAM. An interesting Story, with Title-page and Illustrations in Colours. Cloth gilt, 2s. 6d.

7. **Marion Lee, and other Tales.**
   By MISS A. M. SARGENT, MISS J. STRICKLAND, and others. Cloth gilt, gilt edges, 262 pp., Illustrated Coloured Frontispiece and Title. Price 2s. 6d.

8. **Bright Schemes and Bold Strokes ;**
   a Tale for Boys: by the author of "John Halifax, Gentleman." With Illustrations by Franklin. Handsomely bound, cloth, gilt, 2s. 6d.

The want of good Present Books at half-a-crown has long been felt, The Publishers have much pleasure in issuing these Works, as they are confident they will supply the desideratum.

BOOKS FOR SUNDAY READING.

1. Happy Sundays, for the Young and Good.

In Two Series, of 26 Sundays each; each Series, 3s. Forming a Companion to "Line Upon Line," "Pleasant Sundays."

After observing that the Rev. ROBERT BICKERSTETH, Bishop of Ripon, has connected his name with the publication, the Publishers need scarcely add their own terms of estimation; but they cannot help advancing the opinion, that HAPPY SUNDAYS is a book calculated to promote happiness amongst youthful readers, by affording them Sunday reading of a character both instructive in its matter and amusing in its style.

2. Pleasant Sundays, for the Young and Good.

In Two Series of 26 Sundays each; each Series, 3s. Dedicated, by permission, to the Rev. CANON DALE, and Illustrated by Gilbert, Kearny, Leighton, &c.

TYPE is large and clear. SIZE, 18mo. Demy, as Happy Sundays.
BINDING, strong and tasteful. Frontispiece and Title in Colours.

This little work is especially adapted to the comprehension of the Young, and is exceedingly instructive, while the moral character is of a purely evangelical nature; it consists of a Series of Chapters or Tales (52 in number,) one for each Sunday, with an appropriate Hymn.

3. Sundays with Mamma;

or, THE COMMANDMENTS EXPLAINED: with Short Histories from the Bible. By FRANCIS UPCHER COUSENS, Authoress of "Pleasant Sundays." Price 3s.; or 3s. 6d. Gilt Edges, Handsomely Bound, Red and Blue Cloth, Illustrated with Six Plates, and Title and Frontispiece in Colours, by Leighton.

"This little work, breathing the purest spirit of piety, is just such a book as should be put into the hands of children of all ages, to advance their knowledge of the Scriptures, and teach them to have a correct appreciation of our Holy Decalogue."—*Churchman's Review.*

4. Sunday Employment, Sunday Enjoyment.

For the Young and Good. By MRS. UPCHER COUSENS, Authoress of "Pleasant Sundays," with Frontispiece and Title in Colours, by Richard Doyle, and four other Illustrations. Printed in a bold clear type, price 3s.

"This book will lighten the task of Parent and Teacher in simplifying and applying the sacred doctrines of Divine Truth, and also to render the ways of wisdom ways of pleasantness and peace during the long unoccupied hours of the Lord's-day."

5. Illustrated Scripture Natural History,

with above 50 beautiful Illustrations, and with pleasantly told descriptive Text in Prose and Verse, of the Animal, Vegetable, and Mineral Kingdom, mentioned in Scripture. By the Rev. J. YOUNG, and Miss ANNA MARIA SARGEANT. 18mo, demy, 2s. 6d. or gilt edges, 3s. bound in cloth, lettered sides and back.

This book is intended, by bringing the youthful mind at an early period to some knowledge of the Wonders of Nature, and, at the same time, connecting that knowledge with the Bible, to associate pious thoughts and feelings with the works of God; and imperceptibly create an interest in that Book which is able to make wise unto Salvation.

Dean's 3s. 6d. Series of Prize and Present Books suitable for Young Ladies and Boys.

Crown 8vo. cloth gilt, fully illustrated, 3s. 6d.

8. The Illustrated Book of Wonders,

EVENTS, AND DISCOVERIES. Edited by JOHN TIMBS, Author of "Things Not Generally Known," Illustrated with upwards of 16 Page Engravings of the most striking scenes.

9. One Hundred and Fifty Pictures and

STORIES, or, Happy Hours on Sunday Afternoons, Illustrative of the most Remarkable Events in the New Testament. By MRS. UPCHER COUSENS, author of "Joyful Sunday Stories," &c. handsomely bound, cloth gilt, 3s. 6d.

10. Milly Moss;

or, SUNLIGHT AND SHADE. A Tale of interest and illustrative of character. By ELLEN C. CLAYTON. With eight Coloured Engravings: handsomely bound, cloth gilt, sides and back, 3s. 6d.

11. Miracles of Nature, and Marvels of Art;

SKETCHES AND NARRATIVES OF INTEREST AND INFORMATION. Illustrated with sixteen full-page Engravings, handsomely bound, cloth gilt, sides and back, 3s. 6d.

12. Ministering Men;

or, HEROES OF MISSIONARY ENTERPRISE. With an Essay on the Extension of the Missionary Spirit. By the Rev. JAMES GARDNER, A.M. M.D. Author of "Memoirs of Christian Females," &c. Handsomely bound, cloth gilt, sides and back, 3s. 6d.

13. The Home Story Book;

containing The Discontented Chickens, Little Jane and her New Book, and the Well-bred Doll. With twenty-eight full-page Coloured Illustrations. Large, clear-type. Cloth, gilt, 280 pages. A most interesting Book for a little girl; the tales have a good moral tendency. They are written by a lady who has practical experience of the sort of reading likely to please children. 3s. 6d.

14. Adventures of Dick Onslow

AMONG THE RED SKINS; by W. H. G. KINGSTON. With seventeen Illustrations by W. Harvey, J. Portch, etc. Handsomely bound, cloth gilt, 3s. 6d.

15. Missionary Women;

or, HEROINES OF MISSIONARY ENTERPRISE. With an Introductory Essay, by the Rev. JAMES GARDNER, A.M. Author of "Ministering Men," &c. With eight full-page Engravings, handsomely bound, cloth gilt, 3s. 6d.

Other Books in this Popular Series of 3s. 6d. Books, are four suitable for Young Ladies and four suitable for Boys, viz:—

1. **Remarkable Men, their Histories and**

Adventures; a Book for Boys. By M. S. COCKAYNE. With 14 Illustrations on Tinted Plate Paper, and bound in cloth, gilt and lettered, price 3s. 6d.

2. **Men of Deeds and Daring.**

a Companion Book to the Histories and Adventures of Remarkable Men. By EDWARD N. MARKS; beautifully Illustrated with numerous whole-page Engravings on Tinted Plate Paper, cloth, gilt and lettered, price 3s. 6d.

"Very attractive reading for the young and aspiring, and cannot fail to be popular."

3. **Six Steps to Honour;**

or, Great Truths Illustrated, viz.: Obedience, Truthfulness, Honesty, Kindness, Perseverance, and Piety. By the Rev. H. P. ANDREWS, with seven Illustrations, and Title-page in Gold, by Richard Doyle, etc. Cloth, gilt, 3s. 6d.

No youth can peruse the above book without feeling both wiser and better; it can with confidence be recommended.

The Four P's (Piety, Prudence, Patience,

and Perseverance); or, the Fortunes of Frank on his Road to Wealth. A Tale of the Sea, by H. M. BARKER, Author of "Jem Bunt," "Tough Yarns," etc. With Frontispiece, and 5 Engravings on Tinted Plate Paper, bound in cloth, lettered, gilt edges, price 2s. 6d.

THE FOUR FOR YOUNG LADIES ARE

4. **Notable Women, Stories of their**

Lives and Characters; a Book for Young Ladies. By ELLEN C. CLAYTON; including Miss Florence Nightingale, the Soldier's Friend; Mrs. Elizabeth Fry, the earnest Philanthropist; and others; beautifully Illustrated with Engravings on Tinted Plate Paper, and elegantly bound in cloth, gilt, 3s. 6d.

5. **Celebrated Women, Stories of their**

Lives and Examples, Literary, Social, and Historical. By ELLEN C. CLAYTON; a Companion Book to "Notable Women;" beautifully Illustrated with 8 Page-Engravings on Tinted Plate Paper, cloth, gilt, price 3s. 6d.

6. **Women of the Reformation, their Lives,**

Faith, and Trials. By ELLEN C. CLAYTON. Beautifully Illustrated with superior Engravings, cloth, gilt, 3s. 6d.

7. **Ministering Women, their Lives, Perils,**

and Devotion, in seeking to spread the Faith of their Redeemer among their less-favoured Brethren and Sisterhood of all Nations. Edited by the Rev. Dr. CUMMING, Author of "Voices of the Night." Illustrated with Engravings, cloth, gilt, 3s. 6d.

These books are good books for Prizes or Gifts, as they attract the attention to the Works and Characters of those who have left names in History, and the records of whose good deeds should be treasured in our hearts.

UC SOUTHERN REGIONAL LIBRARY FACILITY
A 000 047 866 9